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A

CYCLOPÆDIA

OF

COMMERCE,

MERCANTILE LAW,

FINANCE, COMMERCIAL GEOGRAPHY,

AND NAVIGATION:

BY

WILLIAM WATERSTON, Esq.

MERCANTILE AGENT AND ACCOUNTANT.

NEW EDITION.

CONTAINING THE PRESENT TARIFF,

AND

AN ESSAY ON COMMERCE,

PUBLISHED BY THE SOCIETY FOR PROMOTING USEFUL KNOWLEDGE.

LONDON:
HENRY G. BOHN, YORK STREET, COVENT GARDEN.
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PREFACE.

THE object of this Cyclopædia is to present, in a popular and accessible form, a digest of the various subjects comprehended under its title. The Work is framed with the view not of instructing the merchant in relation to his own immediate and daily pursuits, but of placing within his reach information which it is always important, and often necessary, that he should possess,—which many engaged in active business might find it exceedingly difficult to procure elsewhere,—and which, being presented under an alphabetical arrangement, may be advantageously consulted even by those who have access to more expensive books.

In regard to the matter of the Work, as distinct from its form, the Author's aim has been to give the greatest possible amount of facts in the smallest number of words. The plan excludes, in general, long essays and treatises; for even those subjects which require considerable space for their proper treatment, have in most cases been subdivided and discussed under separate heads, in a manner which, it is hoped, will be found better adapted for reference than if they had been wholly contained under one title. Thus, while Shipping is the subject of one general article, separate heads are devoted to Registry, Navigation Laws, Steam Navigation, Affreightment, Master, Seamen, Tonnage, Demurrage, Bill of Lading, Convoy, Blockade, Embargo, Salvage, Stranding, Barratry, and other matters relating to that department. It has in short been the leading object throughout to adapt the Work to the wants of mercantile men,—a class to whom ease and rapidity of consultation, if united with accuracy, are matters of pre-eminent importance.

In following out this plan, the Author has endeavoured, to the best of his judgment, to discuss each subject under the particular head in connection with which it is most likely to be sought. In the selection of these heads, however, considerable difficulty was experienced; for it is hardly possible to adopt any principle which would not either exclude something that ought to be admitted, or include articles of very little importance. The difficulty of forming a satisfactory list of titles can indeed be estimated by those only who have made the attempt. The Author cannot flatter himself that he has surmounted this difficulty; but he hopes that any blemishes will be found rather in the redundancy of articles than in their deficiency.

Commodities are described under their English names; those which they bear in the other principal languages of the world being also given. The account embraces generally, not only a description of the commodity and its uses, but a notice of its growth or manufacture; of the marks by which its quality and genuineness are ascertained; and, in the case of the more important articles, the history, progress, and present state of the trade. The fiscal laws principally affecting each commodity will be found either under its name, or under the heads Customs Regulations, Warehouse, Colony, Excise, &c., according to circumstances. The Tariff of Duties is, for facility of consultation, placed at the end of the volume.

The Commercial Statistics of the different countries of the world form another leading feature. After a brief description of the position, extent, population, and form of government of each country, there is furnished, in smaller type, according to the latest authorities, a succinct account of its physical character, productions, and manufactures; its inland trade; and its commerce with other countries, especially Britain. A descriptive list of its principal seaports is next given; and the article is closed with a table containing an account of its measures, weights, and monies, its banks, finances, &c.

Commercial Law, a department for which the Author is indebted to Mr. BURTON, Advocate, occupies a large portion of the Work; the articles being given with a fulness which, it is hoped, may for all common purposes make a reference to other books unnecessary. Besides furnishing a digest of the mercantile, maritime, and bankrupt laws of England, it sets forth the peculiarities which belong to Scotland, including the separation law, as well as some of those which belong to Ireland. An explanation is likewise given of the chief points of international law which affect the interests of the merchant and shipowner. No apology is deemed necessary for committing this department to a member of the Scottish bar; since the leading principles of the mercantile code are the same in all parts of the empire, and where there are important differences, they are generally created by statute, and are thus in a condition to be distinctly explained, through quotations from, or analyses of, the acts in which they appear.

The remainder of the Work cannot be classified. It includes, as indicated in the title, articles on Commerce, Money, Banking, Taxation, and Credit; on Railways, Roads, Canals, Docks, the Post-Office, and Lloyd's; the Customs and Excise Regulations; an account of the Funding System, Colonies, and the East India Company; Life Assurance, Interest and Annuities; articles under the heads Quarantine, Lighthouse, Book-keeping, Exchange, Measures and Weights, and Measures and Divisions of Time, Stamp-duties, Friendly and Loan Societies, Emigrant, Prussian Customs Unions, and Patents, Pawnbroking, and such like; besides an explanation of mercantile terms and usages, and a considerable body of miscellaneous information. The article on Interest and Annuities is given with a copiousness which the Author flatters himself is rarely to be found, except in works exclusively devoted to the subject: it contains a variety of useful tables, including, by the kind permission of JOSHUA MILNE, Esq., the eminent Actuary of the Sun Assurance Office, an abridgment of his Carlisle Tables.

The best sources of information have been consulted in preparing the different articles; and a free use has throughout been made of the returns laid before Parliament, of the statistical volumes annually issued by the Board of Trade, and of the reports which have emanated from the commissioners deputed by our government to inquire into the manufactures and commerce of foreign countries. Not a few of the articles have been revised by manufacturers and others experienced in the matters to which they relate.

As to errors, whether in the statement of facts or in deductions from premises, some such are unavoidable in every large work, however carefully the writer may have discharged his duty; and where the contents are so varied as in the present volume, the causes of mistake must be still more numerous. The Author, while on this ground he solicits indulgence, can at least say, that no exertions have been spared to procure sound information, to convey it in clear and concise language, and generally to produce a work at once accurate and useful.

The volume is closed with a short Supplement, bringing down to the present time the information contained in the early part.

The preliminary Treatise on the Principles, Practice, and History of Commerce, was written for the *Society for Promoting Useful Knowledge*, and although published without his name, is well known to be from the able pen of J. R. M'CULLOCH, Esq.

A TREATISE

ON

THE PRINCIPLES, PRACTICE, AND HISTORY

OF

COMMERCE.

CHAPTER I.

Definition and Origin of Commerce—Separation of Employments among those by whom Commercial Transactions are carried on—Advantages of this Separation—Wholesale Dealers—Retailers—Brokers, &c.

COMMERCE, from *commutatio mercium*, is the exchange of one sort of commodities for some other sort of commodities.

This species of industry has its origin in the nature of man and the circumstances under which he is placed; and its rise is coeval with the formation of society. The varying powers and dispositions of different individuals dispose them to engage in preference in particular occupations; and every one finds it for his advantage to confine himself wholly or principally to some one employment, and to barter or exchange such portions of his produce as exceed his own demand, for such portions of the peculiar produce of others as he is desirous to obtain and they are disposed to part with. The division and combination of employments is carried to some extent in the rudest societies, and it is carried to a very great extent in those that are improved. But to whatever extent it may be carried, commerce must be equally advanced. The division of employments could not exist without commerce, nor commerce without the division of employments: they mutually act and react upon each other. Every new sub-division of employments occasions a greater extension of commerce; and the latter cannot be extended without contributing to the better division and combination of the former.

In rude societies, the business of commerce, or the exchange of commodities, is carried on by those who produce them. Individuals having more of any article than is required for their own use, endeavour to find out others in want of it, and who at the same time possess something that they would like to have. But the difficulties and inconveniences inseparable from a commercial intercourse carried on in this way are so obvious as hardly to require being pointed out. Were there no merchants or dealers, a farmer, for example, who had a quantity of wheat or wool to dispose of, would be obliged to seek out those who wanted these commodities, and to sell them in such portions as might suit them; and, having done this, he would next be forced to send to, perhaps, twenty different and distant places, before he succeeded in supplying himself with the various articles he might wish to buy. His attention would thus be perpetually diverted from the business of his farm; and while the difficulty of exchanging his own produce for that of others would prevent him from acquiring a taste for improved accommodations, it would tempt him to endeavour to supply most that was essential by his own labour and that of his family; so that the division of employments would be confined within the narrowest limits. The wish to obviate such inconveniences has given rise to a distinct mercantile class. Without employing themselves in any sort of production, merchants or dealers render the greatest assistance to the producers. They collect and distribute all sorts of commodities; they buy of the farmers and manufacturers the things they have to sell; and bringing together every variety of useful and desirable articles in shops and warehouses, individuals are able, without difficulty or loss of time, to supply themselves with whatever they want. Continuity is in consequence, given to all the operations of industry. As every one knows beforehand where he may dispose to the best advantage of all that he has to sell, and obtain all that he wishes to buy, an uninterrupted motion is given to the plough and the loom. Satisfied that they will have no difficulty about finding merchants for their produce, agriculturists and manufacturers think only how they may improve and perfect their respective businesses. Their attention, no longer dissipated upon a variety of objects, is fixed upon one only. It becomes the object of every individual to find out machines and processes for facilitating the separate task in which he is engaged; and while the progress of invention is thus immeasurably accelerated, those who carry on particular businesses acquire that peculiar dexterity and *sleight of hand* so astonishing to those who live in places where the division of labour is but imperfectly established. Facility of exchange is, in truth, the vivifying principle, the very soul of industry; and no interruption is ever given to it without producing the most ruinous consequences.

The merchants, or dealers, collect their goods in different places in the least expensive manner; and by carrying them in large quantities at a time, they can afford to supply their respective customers at a cheaper rate than they could supply themselves. Not only, therefore, do they, by enabling every employment to be carried on without interruption, and the divisions of labour to be perfected, add prodigiously to the powers of industry, and by consequence to the wealth of the community, but they also promote the convenience of every one, and reduce the cost of merchandising to the lowest limit. According as commerce is extended, each particular business becomes better understood, better cultivated, and carried on in the best and cheapest method: where it is far advanced, the whole society is firmly linked together; every man is indebted to every other man for a portion of his necessaries, conveniences, and enjoyments; everything is mutual and reciprocal; and a large country becomes, in effect, from the intimate correspondence kept up through the medium of the mercantile class, like a large city.

The annihilation of the class of traders would deprive us of all these advantages. The difficulties that would then be experienced in selling and buying would oblige every one to attempt, in so far as possible, directly to supply his own wants; the division of employments would be contracted on all sides, and the country would gradually relapse into a state little, if at all, superior to its state at the Conquest.

The celebrated Italian economist, the Count di Verri, has defined commerce to be the conveyance of commodities from place to place (*trasporto delle mercanzie da un luogo a luogo*). This definition has been adopted by M. Say, who contends that commerce does not consist in exchanges, but in bringing commodities within reach of the consumers (*il consiste essentiellement à placer un produit à la portée de ses consommateurs*). But this is plainly to confound the means with the end; the preparations for an exchange with the exchange itself. The conveyance of commodities from place to place is necessary to enable commerce to be carried on; but unless they be conveyed in the view of being sold or exchanged for other commodities, and unless that exchange actually takes place, there is no room or ground for considering the conveyance in the light of a commercial operation. It is obvious, too, that though the Count di Verri's definition were not erroneous in this respect, it is not sufficiently comprehensive. Suppose that a hat-manufactory is established in Regent-street, and that a shop is attached to it, where the hats are sold; no one doubts that those employed in this shop are engaged in a commercial undertaking, and yet they have nothing to do with the carriage of commodities. Whatever, therefore, may be the particular sort of commerce carried on, whether the commodities have been brought from a distance or produced on the spot, its object and end is an exchange; when this end is not attained, no act of commerce can be said to have taken place.

The erroneous definition of commerce which M. Say has adopted, has hindered him from rightly appreciating its influence. 'In commerce,' says he, 'there is a genuine production, because there is a modification productive of utility and value. The merchant, after buying a commodity at its current price, sells it again at its current price; but the last price is greater than the former, because the merchant has brought the commodity into a situation which has really augmented its price; and the society is enriched by this augmentation.'—(*Cours d'Economie Politique*, t. ii., p. 213.) But though this be true, it is not the whole truth, nor even the greater part of it. Suppose that a hatmaker and a shoemaker live in contiguous houses: if the one exchange his hats for the other's shoes, society will not, certainly, gain much by the change in the locality of the commodities; but it will, notwithstanding, be materially benefited by the transaction; for, in consequence of the exchange, each tradesman will be able to confine himself to his own business: the hatmaker will not be obliged to waste his time in clumsy attempts to make his own shoes, nor will the shoemaker be compelled to make his own hat. It is in this that the *peculiar* advantage of commerce consists. What an individual gives for anything is, speaking generally, the fair equivalent of what he gets. But the facility of exchanging allows every one, as has been already seen, to apply all his energies to some one department; and in this way occasions the production of an incomparably greater quantity of all sorts of wealth than it would otherwise be possible to produce.

The mercantile class has been divided into two leading classes—the wholesale dealers and the retail dealers. This division, like the divisions in other employments, has grown out of a sense of its utility. The wholesale merchants buy the goods at first hand of the producers; but instead of disposing of them to the consumers, they generally sell them to the retailers or shopkeepers, by whom they are retailed or distributed to the public in such quantities and in such a way as is most suitable for them. The interest of all parties is consulted by this division. Had the wholesale dealers attempted also to retail their goods, they could not have given that undivided attention to any part of their business, so necessary to ensure its success. A retailer should be constantly at his shop; not merely that he may attend to the orders daily sent to him, but that he may learn all that transpires with respect to the situation of his customers, their wants, and their circumstances. But wholesale dealers, being obliged to attend to what is going on in different and distant quarters, cannot give this minute attention to what happens in their immediate vicinity; and though they could, the capital required to carry on a wholesale business would not be sufficient for that purpose were the business of retailing joined to it. Were there only one class of merchants, the capital and the number of individuals employed in commercial undertakings would not, probably, be less than at present; but the merchant, being obliged to apply himself principally to one department, would have to leave the chief share of the management of the other to servants—a change which, as every one knows, would be productive of the most mischievous consequences.

There can, therefore, be no doubt that the separation in question has been highly advantageous. The classes of merchants, like those of artificers, are mutually serviceable to each other and to the public. Without this subdivision, commerce would have been impeded in its operations; particular branches of it would have been comparatively neglected; nor would any branch have been carried on with the same economy and attention with which all are now conducted.

But notwithstanding what has been stated, a notion seems to be very generally entertained, that retail dealers are the least useful class of tradesmen; and their increase has seldom been looked upon with a favourable eye. This, however, is a most unfounded prejudice. Every one is ready to admit, that the wholesale merchant who brings a cargo of coal from Newcastle, or a cargo of tea from China, has rendered an essential service to the community. But of what use would this importation be, were not these commodities retailed, or divided and sold in portions suited to the wants and means of the citizens? There are but few persons, even in this immense metropolis, who would choose to supply themselves at once with an entire cargo of coal; and there is not one who would so much as think of buying a cargo of tea. The truth is, that the one species of dealers is in no respect more or less advantageous than the other. If commodities were not retailed, the wholesale trade would have to be abandoned; while, on the other hand, retailing could not be carried on without the assistance of the wholesale dealers.

The following passage from the Wealth of Nations confirms and illustrates what has now been stated:—

'Unless a capital was employed in breaking and dividing certain proportions either of the rude or manufactured produce into such small parcels as suit the occasional demands of those who want them, every man would be obliged to purchase a greater quantity of the goods he wanted than his immediate occasions required. If there was no such trade as a butcher, for example, every man would be obliged to purchase a whole ox or a whole sheep at a time. This would generally be inconvenient to the rich, and much more so to the poor. If a poor workman was obliged to purchase a month's or six months' provisions at a time, a great part of the stock which he employs as a capital in the instruments of his trade or in the furniture of his shop, and which yields him a revenue, he would be forced to place in that part of his stock which is reserved for immediate consumption, and which yields him no revenue. Nothing can be more convenient for such a person than to be able to purchase his subsistence from day to day, or even from hour to hour, as he wants it. He is thereby enabled to employ almost his whole stock as a capital; he is thus enabled to furnish work to a greater value; and the profit which he makes by it in this way much more than compensates the additional price which the profits of the retailer imposes upon the goods. The prejudices of some political writers against shopkeepers and tradesmen are altogether without foundation. So far is it from being necessary either to tax them or to restrict their numbers, that they can never be multiplied so as to hurt the public, though they may be so as to hurt one another. The quantity of grocery goods, for example, which can be sold in a particular town is limited by the demand of that town and its neighbourhood. The capital, therefore, which can be employed in the grocery trade cannot exceed what is sufficient to purchase that quantity. If this capital is divided between two different grocers, their competition will tend to make both of them sell cheaper than if it were in the hands of one only; and if it were divided among twenty, their competition would be just so much the greater, and the chance of their combining together, in order to raise the price, just so much the less. Their competition might, perhaps, ruin some of themselves; but to take care of this is the business of the parties concerned, and it may safely be left to their discretion: it can never hurt either the consumer or the producer. On the contrary, it must tend to make the retailers both sell cheaper and buy dearer than if the whole trade was monopolized by one or two persons. Some of them, perhaps, may occasionally decoy a weak customer to buy what he has no occasion for. This evil, however, is of too little importance to deserve the public attention, nor would it necessarily be prevented by restricting their numbers.' (*Wealth of Nations*, vol. ii., p. 144.)

It is often asserted that the retail dealers make enormous profits, and that they charge exorbitant prices. But the smallest reflection must suffice to satisfy every reasonable person that these statements can have no good foundation. The retailers have no monopoly of the market. Any individual who thinks fit may open a retail shop to-morrow; and such being the case, can any one imagine that, in a country where competition is pushed to its farthest limits, and where thousands are upon the watch to find out methods of employing capital with the smallest additional advantage, a large class of traders, enjoying no peculiar privilege, and whose business is not difficult to learn, should be permanently and generally in the habit of realizing a comparatively large profit? Any such supposition would be absolutely ludicrous. It is true, indeed, that particular tradesmen, who have, by means of superior skill, or what, perhaps, is more common, through accident or superior address, obtained a reputation in the fashionable world, often realise immense profits. Such persons are in some measure emancipated from the influence of that competition which beats down the prices and profits of their neighbours to the same common level. There is a *je ne sais quoi* about their shops, which has a powerful attraction for certain classes of customers, and induces them to buy articles there, which they might buy elsewhere at a cheaper rate. But shopkeepers and customers of this description are but few in number; and the extra profits which the former make are far too inconsiderable, when considered as a whole, sensibly to affect the average rate of profit realised by the rest of the mercantile class.

Besides the peculiar description of persons now alluded to, the smaller class of retailers, or those established in country towns and villages, often seem to realise very large profits. But the magnitude of their gains is more apparent than real. Such persons are obliged to attend to their shops, and they must, therefore, sell their goods for such a sum as will not only yield them the customary profits of stock at the time, but also the wages or remuneration to which they are entitled. When a large capital can be employed in the business of retailing, a small addition to the price of the goods sold is sufficient to afford wages; but where the business transacted is but small, the addition made to the price on account of wages must be proportionally large; and hence it is that groceries and such like articles are for the most part cheaper in cities than in the country. The cause of the discrepancy is, not that the country grocer is making large profits, but that he is obliged, in order to get a return for his trouble in attending to his shop, to increase considerably the price of the articles in which he deals.

'Apothecaries' profit,' says Dr. Smith, 'is become a by-word, denoting something uncommonly extravagant. This great apparent profit, however, is frequently no more than the reasonable wages of labour. The skill of an apothecary is a much nicer and more delicate matter than that of any artificer whatever; and the trust which is reposed in him is of much greater importance. He is the physician of the poor in all cases, and of the rich where the distress or danger is not very great. His reward, therefore, ought to be suitable to his skill and his trust, and it arises generally from the price at which he sells his drugs. But the whole drugs which the best employed apothecary, in a large market-town, will sell in a year, may not, perhaps, cost him above thirty or forty pounds. Though he should sell them, therefore, for three or four hundred, or at a thousand per cent. profit, this may frequently be no more than the reasonable wages of his labour, charged, in the only way in which he can charge them, upon the price of his drugs: the greater part of the apparent profit is real wages disguised in the garb of profit.' (*Wealth of Nations*, vol. i., p. 184.)

Besides the two great classes of wholesale and retail dealers, there are various subordinate classes, such as brokers, factors, agents, &c., employed in carrying on the business of commerce. We subjoin a few details respecting those that are most important.

Brokers are persons employed, as middle-men, to transact business or negociate bargains between different merchants or individuals. They are sometimes licensed by public authority, and sometimes not. They are divided into numerous classes, as bill or exchange brokers, stock brokers, ship and insurance brokers, &c. It is usual, too, for the brokers who negociate sales of produce between different merchants, to confine themselves to some one department or line of business; and by attending to it exclusively, they acquire a more intimate knowledge of its various details, and of the credit of those engaged in it, than could be looked for on the part of a general merchant; and are consequently able, for the most part, to buy on cheaper and sell on dearer terms, than those less familiar with the business. It is to these circumstances, to a sense of the advantages to be derived from using their intervention in the transacting of business, that the extensive employment of brokers in London, and all other large commercial cities, is to be ascribed.

Factors are agents employed to transact business. They are not generally resident in the same place as their principals, but usually in a foreign country, or a distant part of the same country. They are authorized, either by letter of attorney, or otherwise, to receive, buy, and sell goods and merchandise, and, generally, to transact all sorts of business on account of their employers, under such conditions and limitations as the latter may choose to impose. A very large proportion of the foreign trade of this, and most other countries, is at present carried on by means of factors or agents.

A factor is usually paid by a per centage or commission on the goods he sells or buys. If he act under what is called a *del credere* commission, that is, if he guarantee the price of the goods sold on account of his principal, he receives an additional per centage to indemnify him for this additional responsibility. In cases of this sort, the factor stands in the buyer's place, and must answer to the principal for the value of the goods sold. But where the factor undertakes no responsibility, and intimates that he acts only on account of another, it is clearly established that he is not liable in the event of the buyer's failing.

Commercial travellers form, in Great Britain, a numerous and a highly useful class. They are employed by the wholesale merchants, and frequently also by the manufacturers. Their business is to visit the retail dealers in different parts of the country, and to inform themselves of their character and circumstances, and the degree of credit that may be safely given to them; to give the dealers every requisite information with respect to the articles which they undertake to furnish; to receive payment of accounts; and to receive and transmit orders to their employers. The information that is thus obtained by the manufacturers and wholesale dealers enables them to conduct their business with comparative security; and the wish to stand well in the estimation of the traveller is a motive to the retail dealers to be punctual to their engagements. The travellers generally make their visits periodically, giving previous intimation of their approach to those whom they visit. The number of such persons in Great Britain is very great. Some are paid by a commission on the business which they perform; but the great majority are paid by salaries.

Hawkers and pedlars are a sort of ambulatory retail dealers. They were at one time very common in this, as they still are in several other countries: but since shops, for the sale of almost every sort of produce, have been opened in every considerable village throughout Britain, their numbers have been greatly diminished They are obliged to take out licences

Chapter II.

Different species of Trade—Home Trade—Foreign Trade—Colony Trade—Influence and operation of each—Remarks on Dr. Smith's Theory, as to the comparative advantageousness of Commercial undertakings.

In a highly civilized country like Great Britain, the trade in every commodity in considerable demand, as corn, sugar, tea, timber, &c. affords employment for a separate class of traders. But for all purposes of general inquiry, it is sufficient to consider commerce under three heads, viz. (1.) the Home Trade, or that carried on between individuals of the same country; (2.) Foreign Trade, or that carried on between individuals of different countries; and (3.) the Colony Trade, or that carried on between the inhabitants of any particular country and its colonists. We subjoin a few remarks upon each of these heads.

I. *Home Trade.*—It has been already seen that the varying capacities and dispositions of different individuals occasion the introduction of a division of employments, and the practice of exchange or barter. But the external circumstances under which different individuals are placed, vary still more than their natural powers or tastes. One set inhabit a rich fertile plain, suitable for the growth of corn and other culmiferous crops; another set inhabit a mountainous district, the soil of which is comparatively sterile, but which is well fitted for rearing cattle; another set are planted upon the margin of a river, or arm of the sea, abounding in every facility for carrying on the business of fishing; and so on. Now it is obvious, that though the individuals belonging to any particular district had not established a division of labour amongst themselves, it would be highly for their advantage to establish one with those occupying other districts, the productions of which are materially different. When the inhabitants of Newcastle apply themselves principally to the coal trade, those of Essex to the raising of wheat, and those of the highlands of Scotland to the raising of cattle and wool,—each set avail themselves, in carrying on their employments, of the peculiar powers of production conferred by Providence on the districts they occupy; and by exchanging such portions of their produce as exceed their own consumption, for the surplus articles raised by others, their wealth, and that of every one else, is immeasurably increased. It is in this *territorial division of labour*, as it has been happily designated by Colonel Torrens, that the main advantage of commerce consists. In commercial countries, each individual may not only enter, at pleasure, on such pursuits as he deems most advantageous; but the entire population of districts and provinces are enabled to turn their energies into those channels in which they are sure to receive the greatest assistance from natural powers. Suppose England were divided into separate parishes, or even counties, surrounded respectively by Bishop Berkeley's wall of brass, and having no intercourse with each other, in what a miserable situation should we be! Instead of 1,500,000, London could not, under such circumstances, contain 15,000 inhabitants; and these would be exposed to numberless privations, of which we have not the slightest idea. Unless the territorial division of labour were carried to some extent, the division of employments amongst individuals occupying the same district could be but very imperfectly established, and would be of comparatively little use. It is only when every one is able both to gratify his taste, and to avail himself of the varying capacities of production given to different districts, that the benefits of commerce can be fully appreciated; and that it becomes the most copious source of wealth, as well as the most powerful engine of civilization.

'With the benefits of commerce,' says an eloquent writer, 'or a ready exchange of commodities, every individual is enabled to avail himself to the utmost of the peculiar advantage of his place; to work on the peculiar materials with which nature has furnished him; to humour his genius or disposition, and betake himself to the task in which he is peculiarly qualified to succeed. The inhabitant of the mountain may betake himself to the culture of his woods, and the manufacture of his timber; the owner of pasture lands may betake himself to the care of his herds; the owner of the clay-pit to the manufacture of his pottery; and the husbandman to the culture of his fields, or the rearing of his cattle; and any one commodity, however it may form but a small part in the whole accommodations of human life, may, under the facilities of commerce, find a market in which it may be exchanged for what will procure any other part, or the whole: so that the owner of the clay-pit, or the industrious potter, without producing any one article immediately fit to supply his own necessities, may obtain the possession of all that he wants. And commerce, in which it appears that commodities are merely exchanged, and nothing produced, is nevertheless, in its effects, very productive; because it ministers an encouragement and facility to every artist, in multiplying the productions of his own art; thus adding greatly to the mass of wealth in the world, in being the occasion that much is produced.' (*Ferguson's Principles of Moral and Political Science*, vol. ii. p. 424.)

II. *Foreign Trade.*—The trade carried on between individuals of different countries is founded on precisely the same circumstances—the differences of soil, climate, and productions—on which is founded the trade between different districts of the same country. One country, like one district, is peculiarly fitted for the growth of corn; another for the cultivation of the grape; a third abounds in minerals; a fourth has inexhaustible forests; and so forth.

'Hic segetes, illic veniunt felicius uvæ:
'Arborei fetus alibi, atque injussa virescunt
'Gramina. Nonne vides, croceos ut Tmolus odores,
'India mittit ebur, molles sua thura Sabæi?
'At Chalibes nudi ferrum, virosaque Pontus
'Castorea, Elladum palmas, Epeiros equarum?
'Continuo has leges, æternaque fœdera certis
'Imposuit natura locis.'—Georg. lib. i. lin. 54.

Providence, by thus distributing the various articles suitable for the accommodation and comfort of man in different countries, has evidently provided for their mutual intercourse. In this respect, indeed, foreign trade is of far more importance than the home trade. There is infinitely less difference between the products of the various districts of the most extensive country, than there is between the products of different and distant countries; and the establishment of a territorial division of labour amongst the latter must, therefore, be proportionally advantageous.

'As the same country is rendered richer by the trade of one province with another; as its labour becomes thus infinitely more divided, and more productive than it could otherwise have been; and as the mutual interchange of all those commodities which one province has and another wants, multiplies the comforts and accommodation of the whole, and the country becomes thus, in a wonderful degree, more opulent and more happy; so the same beautiful train of consequences is observable in the world at large, that vast empire, of which the different kingdoms may be regarded as the provinces. In this magnificent empire, one province is favourable to the production of one species of produce, and another province to another. By their mutual intercourse mankind are enabled to distribute their labour as best fits the genius of each particular country and people. The industry of the whole is thus rendered incomparably more productive; and every species of necessary, useful, and agreeable accommodation is obtained in much greater abundance, and with infinitely less expense.' *Mills' Commerce Defended*, p. 38.)

But to enable the advantages of foreign commerce to be rightly appreciated, it will be proper to consider it under the following heads, viz.—1st, Its influence in supplying us with useful and durable articles, of which we should otherwise be wholly destitute: 2nd, Its influence in multiplying and cheapening the peculiar productions of our own country: 3rd, Its influence in making us acquainted with foreign discoveries and inventions, and in exciting invention by means of competition and example: and 4th, Its indirect influence upon industry, by increasing the sources of enjoyment.

I. With respect to the first of these influences, or the effect of commerce in furnishing every people with commodities not otherwise attainable, it is too obvious and striking to require any lengthened illustrations. Great Britain is as abundantly supplied with native products as most countries, and yet any one who reflects for a moment on the nature and variety of the articles we import from abroad, must be satisfied that we are indebted to trade for a very large part of our superior accommodations. Tea, sugar, coffee, wine, and spices; silk and cotton, the materials of our most extensive manufactures; gold and silver; and an endless variety of other highly important articles;—are sent to us by foreigners. And were the importation put an end to, what a prodigious deduction would be made, not from our comforts and enjoyments merely, but also from our means of supporting and employing labourers! If foreign commerce did nothing more than supply us with so many new products, it would be very difficult to overrate its value and importance.

II. But such is the beneficent influence of commerce, that while it supplies an endless variety of new productions, it multiplies and cheapens those that are peculiar to every country. It does this, by enabling each separate people to employ themselves, in preference, in those departments in which they enjoy some natural or acquired advantage, and by opening the markets of the world to their productions. When the demand for a commodity is confined to a particular country, as soon as it is supplied improvement is at a stand. The subdivision and combination of employments is, in fact, always dependant upon and regulated by the extent of the market. Dr. Smith has shewn, that by making a proper distribution of labour among ten workmen, in a pin manufactory, 48,000 pins might be produced in a day; and since his time the number has been nearly doubled. But had the demand not been sufficient to take off this quantity of pins, the divisions and improvements in question could not have been made; and the price of pins would, in consequence, have been comparatively high. This principle holds universally. The most important manufacture carried on in Great Britain,—that of cotton,—is entirely the result of commerce. Supposing, however, that cotton wool had been a native production, we could never have made such astonishing advances in the manufacture had we been denied access to foreign markets. Notwithstanding the splendid discoveries in the machinery, and the perfection to which every department of the trade has been brought, the vast extent of the market has prevented its being glutted; and has stimulated our manufacturers and artisans to persevere, with unabated ardour, in the career of improvement. Our cotton mills have been constructed, not that they might supply the limited demand of Great Britain, but that they might supply the demand of the whole world. And in consequence of the extraordinary subdivision of labour, and the scope given to the employment and improvement of machinery, by the unlimited extent of the market, the price of cottons has been reduced to less, probably, than a fourth part of what it would have been had they met with no outlet in foreign countries. The hardware, woollen, leather, and other manufactures, exhibit similar results. The access their products have had to other markets has led to important improvements in their production; so that, as was previously stated, commerce not only supplies us with a vast variety of new and desirable articles, but it also cheapens the staple productions of the country, and renders them more easily attainable by the great mass of the people.

III. The influence of commerce in making the people of each country acquainted with foreign inventions and discoveries, and in stimulating ingenuity by bringing them into competition with strangers, is obvious and powerful.—Commerce distributes the gifts of science and art, as well as those of nature. It is the great engine by which the blessings of civilization are diffused throughout the world. It establishes a friendly intercourse among the people of all countries, and makes every one acquainted with the processes carried on, and the inventions made, in every corner of the globe. Were any considerable improvement made in any important art, either in China or Peru, it would very speedily be understood and practised in England. It is no longer possible to monopolize an invention. The intimate communication that now obtains amongst nations renders any important discovery, wherever it may be made, a common benefit. The ingenious machine invented by Mr. Whitney, of the United States, for separating cotton wool from the pod, has been quite as advantageous to us as to the Americans; and the inventions of Watt and Arkwright have added to the comfort of the inhabitants of Siberia and Brazil, as well as of England. The genuine commercial spirit is destructive of all sorts of monopolies. It enables every separate country to profit by the peculiar natural powers and acquired skill of all the others; while, on the other hand, it communicates to them whatever advantages it may enjoy. Every nation is thus intimately associated with its neighbours. Their products, their arts, and their sciences, are reciprocally communicated; and the emulation that is thus excited and kept up, forces routine to give place to invention, and inspires every people with zeal to undertake, and perseverance to overcome, the most formidable tasks. It is not possible to form any accurate notions as to what would have been our state at this moment, had we been confined within our own little world, and deprived of all intercourse with foreigners. We know, however, that the most important arts, such as printing, glass-making, paper-making, &c., have been imported from abroad. No doubt we *might* have invented some of these ourselves; but there is not a shadow of a ground for supposing that we should have invented them all; and without foreign example and competition, we could hardly have carried any of them beyond the merest rudiments.

IV. The influence of commerce upon industry, by its increasing the number of desirable articles, though not quite so obvious perhaps as the influences already specified, is not less powerful and salutary. Industry is in no respect different from the other virtues, and it were vain to expect that it should be strongly manifested where it does not bring along with it a corresponding reward. In the early stages of society, before artificial wants have been introduced, and when men are satisfied if they can avert the attacks of hunger, and procure an inadequate defence against the cold, industry is confined within the narrowest limits. And provided the mildness of the climate renders clothing and lodging of little importance, and the earth spontaneously pours forth an abundant supply of fruits, the inhabitants are immersed in sloth, and seem to place their highest enjoyment in being free from occupation. Sir William Temple, Mr. Hume, and some other sagacious inquirers into the progress of society, have been struck with this circumstance; and have justly remarked, that those nations that have laboured under the greatest national disadvantages have made the most rapid advances in industry.

But in civilized and commercial societies, new products and new modes of enjoyment, brought from abroad, or invented at home, stimulate the inhabitants to continued exertions. Their acquired tastes and the wants which civilization introduces, and custom and example render universal, become infinitely more numerous, and as urgent as the tastes or wants of those that are less advanced. The passion for luxuries, conveniencies, and enjoyments, when once excited, becomes quite illimitable. The gratification of one desire leads immediately to the formation of another. 'The natural flights of the human mind are not from pleasure to pleasure, but from hope to hope.' The happiness of a civilized nation is not placed in indolence or enjoyment, but in continued exertion; in devising new contrivances to overcome new difficulties, in extending still further the boundaries of science, and increasing their command over luxuries and enjoyments. The remark of the Abbé Mably is as true as it is forcibly expressed:—'*N'est on que riche? On veut être grand. N'est on que grand? On veut être riche. Est-on et riche et grand? On veut être plus riche et plus grand encore.*'—(Œuvres, t. iv., p. 76.)

Without commerce this progress would never be realized. The commodities possessed by particular nations are but few, and may be attained with comparatively little labour. Generally speaking, a man may easily supply himself with corn, cloth, and beer; and if the utmost exertions of ingenuity, and the most laborious efforts of industry could only furnish additional quantities of those articles, they would very soon cease to be made. Men do not practise industry and economy for their own sakes, but for the advantages that result from them; and the more consequently that these advantages are multiplied, that is, the greater the variety of wants they are made to supply, and of gratifications they are made to command, the greater will be the energy displayed in their prosecution. '*Le travail de la faim*,' as Raynal has well observed, '*est toujours borné comme elle; mais le travail de l'ambition croît avec ce vice (vertu'?) même.*'

And hence the true way to render a people industrious is to endeavour to inspire them with a taste for the luxuries and enjoyments of civilized life; and this will be always most easily done, by giving every facility to the cultivation of foreign commerce. The number of new articles, or, in other words, of new motives to stimulate, and new products with which to reward the patient hand of industry, is then prodigiously augmented. The home producers exert themselves to increase their supplies of disposable articles, that they may exchange them for those of other countries and climates. And the merchant, finding a ready demand for such articles, is stimulated to import a greater variety, to find out cheaper markets, and thus constantly to apply new incentives to the vanity and ambition, and consequently to the industry, of his customers. Every power of the mind and body is thus called into action; and the passion for foreign commodities—a passion which some shallow moralists have ignorantly censured—becomes one of the most efficient causes of industry, wealth and civilization.

But there are other considerations connected with this view of the subject that must not be passed over without observation. The establishment of a right of property in land is one of the foundations on which the structure of society mainly rests. Where this right is not established, there can be neither riches nor civilization; for no one would undertake to clear and cultivate the ground, unless he were well assured that he should be allowed peaceably to enjoy the fruits of his industry. The institution of the right of private property in land is not, however, enough to make its cultivation be carried to the highest point of which it is susceptible. Before this can be done, the cultivators must cease to be satisfied with simple fare. The soil is, in the great majority of cases, capable of furnishing supplies of food for a great many more individuals than can be profitably employed in its culture; but when the wants of the inhabitants are few, and easily supplied, its productive energies are not developed. Its occupiers are satisfied, if the crops they raise are sufficient to supply their own wants; and it would, indeed, be a contradiction to suppose that they should trouble themselves about raising corn of which they could make no use. During the middle ages, when commerce was comparatively little cultivated, the great landed proprietors kept immense bodies of retainers, and the necessity of providing supplies for their support occasioned an extension of cultivation that would not otherwise have taken place. But the introduction of commerce in more modern times, and the consequent growth of arts and manufactures, has led to a totally different state of things. The barbarous and unwieldy pomp of the middle ages has been supplanted by elegance and refinement. Instead of wasting their fortunes on crowds of idle and disorderly vassals, the great lords expend them upon the products of industry; and such is the vast variety of these products in every commercial country, that the richest individuals can never be without a motive to augment their fortunes, seeing the endless gratifications they may be applied to procure. The effects of this change have been alike salutary and extraordinary. Those who, of old, would have been the servile dependants of some feudal chief, are now industrious, and perhaps opulent manufacturers and merchants; and though they have no share in the ground, nor any thing to do with its cultivation, they are regularly and liberally supplied with its produce. The population has been quadrupled, or more, and yet every one lives in far greater plenty and comfort. The occupiers of the soil, who, during the age of the Edwards and the Henrys, were satisfied if they could pay a trifling rent, and procure a rude and meagre subsistence for themselves, have had the standard of enjoyment elevated. They have acquired a taste for those comforts and gratifications that were formerly enjoyed by their masters only, and to acquire them they exert all their energies, and extort from the ground the utmost it can be made to produce, increasing a hundred-fold the supplies of food.

The admirers of simplicity, or rather of rusticity, may perhaps urge, that the happiness of mankind is not increased by this never-ceasing pursuit of new inventions and additional wealth; that habit reconciles individuals to the state in which they are accustomed to live; and that the Irishman or the Greenlander, when abundantly supplied with potatoes or fish, is as cheerful and happy as the lordly inhabitant of the Palais Royal, or of Belgrave-square. We may observe, however, that none but rich and refined countries can ever be secure against the devastations of famine, which frequently sweep off almost the entire population of semi-barbarous nations; and it is in such countries only that those speculative and elegant studies which expand and liberalize the mind can be prosecuted. But whether the actual attainment of wealth or of distinction of any sort be favourable or unfavourable to happiness, its *pursuit* is eminently congenial to the nature of man. The wish to improve our condition comes with us into the world, and only quits us when we cease to exist. The career of enterprise and ambition is uniformly entered upon with the greatest keenness where there is most prosperity and freedom, and is abandoned only in those unfortunate countries where distress and tyranny weigh down all the moral energies. When the end is compassed, when the object of our exertions has been attained, it may perhaps be found not worth the trouble of acquiring, or, though prized at first, the enjoyment may pall upon the sense; but this, instead of discouraging, invariably tempts to new efforts; so that the pursuit of even imaginary conveniences,—of happiness never to be realized,—is productive of an intensity of pleasure and gratification, not attainable in the apathy of a fixed or permanent situation. 'We are ever ready,'' says a profound and eloquent writer already quoted, 'to own, that labour is prescribed to man,—that he is destined to earn every blessing by the sweat of his brow, by the labour of his hands, or the exertion of his mind; but we do not always perceive that these labours and exertions are themselves of principal value, and to be reckoned among the foremost blessings to which human nature is competent; that mere industry is a blessing apart from the wealth it procures; and that the exercises of a cultivated mind, though considered as means for the attainment of an external end, are themselves of more value than any such end whatever.'—(*Ferguson's Principles of Moral and Political Science,* vol. i. p. 250.)

It is therefore evident, as well from what has now been stated, as from what was remarked under the previous heads, that those who imagine that the benefit which foreign commerce confers on a country like Great Britain or France, consists in its adding to the number of conveniencies and enjoyments, entirely overlook some of its most important effects. The tastes which grow out of it become the most powerful incentives to industry, and occasion a vast increase of the quantity of corn and cattle. The *species* of means by which commerce produces the effects we have now endeavoured to trace—by which it rouses the indolent to exertion, and gives new vigour to those that are already industrious—is a consideration of inferior importance. The excitement of new wants is the grand object: for, how trifling soever the objects by which they are excited, the spirit of industry and invention diffused throughout society, by the desire to gratify them, is of inestimable value. It is it that carries society forward. Were the desires of man limited, the moment they were supplied, invention would be at an end, the further advance of the race would be for ever arrested, apathy would usurp the place of activity, and life would lose all its charms. 'Withdraw the occupations of men, terminate their desires, existence is a burden, and the iteration of memory is a torment.'

Dr. Paley had a clear perception of the indirect influence of commerce and the arts upon industry. 'It signifies nothing,' says he, 'as to the main purpose of trade, how superfluous the articles which it furnishes are,—whether the want of them be real or imaginary,—whether it be founded in nature or in opinion, in fashion, habit, or emulation; it is enough that they be actually desired and sought after. Flourishing cities are raised and supported by trading in tobacco; populous towns subsist by the manufactory of ribands. A watch may be a very unnecessary appendage to the dress of a peasant, yet, if the peasant will till the ground in order to obtain a watch, the true design of trade is answered; and the watchmaker, while he polishes the case, or files the wheel of his machine, is contributing to the production of corn as effectually, though not so directly, as if he handled the spade, or held the plough. Tobacco is an acknowledged superfluity, and affords a remarkable instance of the caprice of human appetite; yet, if the fisherman will ply his net, or the mariner fetch rice from foreign countries, in order to procure to himself this indulgence, the market is supplied with two important articles of provision, by the instrumentality of a merchandise which has no other apparent use than the gratification of a vitiated palate.'—(*Moral Philosophy, cap.* 11.)

The boundless extent and variety of the desires excited by the cultivation of commerce and the arts, combined with the tendency of population to increase proportionally to the means of subsistence, are the real causes of the advancement of mankind in civilization. 'Man never is, but always to be blest.' The most astonishing inventions do not lessen the demand for them. The increased facilities of subsistence and of enjoyment which they afford add to the population, which speedily expanding to the limits of subsistence, how widely soever these may be extended, renders the necessity for fresh inventions as urgent as ever. Society is thus continually pressed forward;—the discoveries of one age become the property of those that follow, and in their hands lead to new displays of the inventive faculty. But such is the nature of the human mind, that no amount of fortune can ever fully satisfy its cravings; and such is the strength of the principle of increase in the species, that whatever be the supply of useful and desirable products in any country, and whatever be the state of the arts practised in it, the great bulk of the population must always 'eat their bread in the sweat of their brow;' and are sure to feel, even in the most advanced periods, the full force of all those springs which at a remoter epoch, when commerce began to be established, impelled their forefathers to industry, and prompted them to contrive and accumulate

Hitherto we have considered foreign commerce in a general point of view only, without inquiring into the various modes in which it is conducted, and through which it produces its effects. Neither, we confess, does this inquiry seem to us of much consequence; provided the results of the different modes in which we carry on our intercourse with other nations be substantially the same, their elucidation can only be of real importance to those engaged in them, and cannot materially interest the public. But Dr. Smith, and many other writers on commercial subjects, do not admit that the different sorts of commerce maintained with the foreigner are equally advantageous. Dr. Smith, to whom only it is of any use to refer, contends, that a direct foreign trade, or the sending of commodities direct to a foreign country, and importing its products in return, is the most advantageous; that 'a round-about trade of consumption,' or that carried on by first buying from one set of foreigners, and selling to another set, some article of produce, is in the next degree advantageous; and that the 'carrying trade,' or the employment of ships and men in carrying the goods of foreigners from place to place, is the least advantageous of any. It is easy, however, to shew, that these distinctions rest on no good foundation. The only reason advanced by Dr. Smith in support of his opinion is, that in a round-about trade of consumption, or in the carrying trade, the capitals employed are longer of being returned. But had he reflected a little, he could hardly have failed to perceive that this is really of no importance: what all merchants, or rather all individuals look to, is the *rate of net profit* that may be made by engaging in different businesses; and they engage in that which they suppose, all things being taken into account, will yield most profit. Supposing that the customary rate of profit is 10 per cent., those engaged in businesses in which the capital is turned over ten times a-year will, at an average, realize a profit of 1 per cent. upon each transaction; while those engaged in businesses in which the returns are more distant, will realize a proportionally larger amount of profit when the returns are made. If, for example, the capital employed by one individual were only returned once a-year, it would, under the circumstances supposed, yield 10 per cent. in a single payment; and were it returned only once in two or three years, it would at once produce 20 or 30 per cent. Inasmuch, however, as it is by the rate of net profit that different businesses yield, that we are always to judge which is most, and which is least advantageous; and as Dr. Smith has himself demonstrated, in another part of his great work, that no branch of industry can continue to be prosecuted in which profits are depressed below the common level, he has really demonstrated the fallacy of the statements we have now been considering.

Most treatises on commerce and political economy (that of M. Say among others), contain estimates of the comparative extent and advantageousness of the home and foreign trade. But these estimates are rarely bottomed on any sound principle, and generally lead to the most unfounded conclusions. It is obvious that the amount of the commercial transactions carried on amongst the inhabitants of an extensive country, must very greatly exceed those which they carry on with foreigners. This, however, is not, as has been commonly supposed, sufficient to determine the question, which of them is most, or which is least, advantageous? Commerce is not directly productive, nor is the good resulting from it to be measured by its immediate effects. Besides distributing the various productions of art and industry in the best manner, it enables the divisions of labour to be introduced and perfected. When we send cloth or hardware to Portugal for wine, or to Brazil for sugar, we give what is as valuable as that which we receive; and yet both parties gain largely by the transaction: for we get the wine and the sugar for what it took to produce them in countries that are peculiarly fitted for their growth; and the foreigners are supplied with cloth and hardware for what these productions cost in a country where manufacturing industry has been carried to the highest pitch of improvement. Were this intercourse put an end to, the territorial division of labour resulting from it would simultaneously cease; and while we should be obliged either to make a shift without wine or sugar, or to produce them, or substitutes for them, at home, at a hundred or a thousand times the expense it now takes to fetch them from abroad, the Portuguese and Brazilians would be exposed to similar difficulties in getting cloth or hardware. It is clear, therefore, that in estimating the comparative advantageousness of the home and foreign trades, it will not do to look merely at the number of transactions in each. The real question is, which occasions the greatest subdivision of employments, and gives the most powerful spur to industry? This, however, is a question that does not, perhaps, admit of any very satisfactory solution. Without some species of home trade no division of employments could ever have been made, and man must have continued in ignorance and barbarism. And it is, therefore, true to say, that the home trade is the most indispensable to the rise and early progress of the arts. But those who consider the influence of foreign commerce in making man acquainted with an infinity of useful and desirable products, of which he must otherwise have been ignorant, in diverting the industry of every country into the most profitable channels, in improving every process carried on at home, by opening the markets of the world to its produce, and in exciting the desires, and stimulating the industry and invention of all classes, will not hesitate to admit that it has principally contributed to advance society to the high state of improvement to which it has attained.

Dr. Smith has also contended for the superior productiveness of the home trade on different, though, as it appears to us, not more tenable grounds than those now examined.

'The capital,' says he, 'which sends Scotch manufactures to London, and brings back English corn and manufactures to Edinburgh, necessarily replaces, by every such operation, two British capitals, which had both been employed in the agriculture or manufactures of Great Britain. The capital employed in purchasing foreign goods for home consumption, when this purchase is made with the produce of domestic industry, replaces too, by every such operation, two distinct capitals; but one of them only is employed in supporting domestic industry. The capital which sends British goods to Portugal, and brings back Portuguese goods to Great Britain, replaces, by every such operation, only one British capital; the other is a Portuguese one. Though the returns, therefore, of the foreign trade of consumption should be as quick as those of the home trade, the capital employed in it will give but one half of the encouragement to the industry of productive labour of the country.'—(*Wealth of Nations*, vol. ii. p. 158.)

Now it will be observed, that Dr. Smith does not say that the importation of foreign commodities has any tendency to force capital abroad; and unless it do this, it is plain that the statement in the above paragraph is quite inconsistent with the fundamental principle he has elsewhere established, that the productive industry of every country must always be proportioned to the amount of its capital. Suppose, for the sake of illustration, that the case put by Dr. Smith actually occurs, that the Scotch manufactures are sent to Portugal: it is obvious, that if the same demand continue in London for Scotch manufactures as before they began to be sent abroad, an additional capital, and an additional number of labourers, will be required to furnish supplies for both the London and Portuguese markets. In this case, therefore, instead of the industry of the country sustaining any diminution from the export of the Scotch manufactures to a foreign country, it would evidently be augmented, and a new field would be opened for the profitable employment of stock. But if at the same time that the Scotch began to export manufactured goods to Portugal, the Londoners also found out a foreign market where they could be supplied at a cheaper rate with the goods they had previously imported from Scotland, all intercourse between Scotland and London would immediately cease, and the home trade would be changed for a foreign trade. It is obvious, however, that this change could not occasion any embarrassment, and that it would not throw a single individual out of employment. On the contrary, a fresh stimulus would be given to the manufactures, both of Scotland and the metropolis, inasmuch as nothing but their being able to dispose of their produce to greater advantage could have induced the merchants to change the home for a foreign market. The fact is, that when a home trade is changed for a foreign trade, an additional capital belonging to the nation with which it is carried on enters into it; but there is no diminution whatever, either of the capital or industry of the nation which has made the change. So far from this, they are plainly diverted into more productive channels, and are employed with greater advantage. (For some further remarks on this subject, see Ricardo's Principles of Political Economy, 3rd edit. p. 419.)

III. The *Colony Trade* forms the third great department into which commerce is usually divided.

Colonies are establishments formed in foreign countries by bodies of men, who voluntarily emigrate from, or are forcibly sent abroad by, the mother country. Various motives have, at different periods, led to the formation of colonies. Sometimes, as in the case of most of the Greek colonies of antiquity, they were formed by citizens driven from their native country by the violence of political factions: sometimes, as in the case of the Roman colonies, they were formed for the purpose of bridling subjugated provinces; the latter, indeed, were a species of camps or military stations, forming, as it were, the advanced posts of that mighty army which had its head-quarters at Rome. And sometimes, again, as in the case of the Phœnician colonies, and of most of those established in modern times, they have been formed for commercial purposes, or in the view of enriching the mother country, by opening new markets from which she might, if she chose, exclude foreigners.

The nature of the connexion that has existed between colonies and their mother countries has been exceedingly various. Most of the Greek colonies, being founded by private adventurers, who received no assistance from the government of the parent state, were really independent; the duties which they owed to their metropolis being such only as are due to kinsmen and friends, and not those due by subjects to their rulers. The Roman colonies, on the other hand, being founded by the state for an important political purpose, always maintained an intimate connexion with and dependance upon Rome. They formed the great bulwarks of the empire; nor was the conquest of any province ever supposed to be completed till colonies had been established in it, and roads had rendered it accessible to the legions. The colonies established for commercial purposes have generally been subjected to such regulations as were deemed most for the advantage of the parent state. Their growth has thus, in many instances, been retarded; and they have been rendered less serviceable to their founders than they would have been had they been treated with greater liberality.

A colony retained in a state of dependance upon the mother country can be regarded in no other light than as one of her provinces. The trade carried on between them is really a branch of the home trade; and the remarks made upon the latter are all applicable to it. The only really interesting inquiry with respect to commercial colonies is that which has for its object to investigate the nature and influence of the regulations to which their trade is subjected; and upon this we shall enter in a subsequent part of this treatise.

CHAPTER III.

Means by which Commerce may be facilitated—Money and Banks—Weights and Measures—Roads and Canals.

To enumerate the various means by which commercial operations may be facilitated, would be an endless task. It would, in fact, embrace an examination of everything contributing to render property secure, to simplify the law with respect to contracts, to soften the animosities that exist amongst nations, to render individuals alive to their real interests, &c. But there are certain institutions and contrivances which have a peculiarly commercial character, and without which commerce could not be carried on to any considerable extent. Money and banks, weights and measures, roads and canals, commercial treaties, &c. are of this description; and we shall now subjoin a few remarks with respect to them.

I. *Money and Banks.* Without the use of money, of some sort or other, commercial operations must have been greatly embarrassed. Innumerable difficulties would occur in attempting to carry on trade by barter. A., for example, has a quantity of wheat which he wishes to dispose of for a quantity of cloth belonging to B.; but the latter being already sufficiently supplied with wheat, no exchange can take place between them. In such a case A. would have to learn what commodity B. would be inclined to accept in exchange for his cloth; and having acquired this information he would next have to seek out some third person willing to part with the equivalent demanded by B. in exchange for wheat. It might not, perhaps, be possible for A. to get his purpose effected so early as has here been supposed, or without negociating other subsidiary exchanges. What has been stated is, however, sufficient to evince the extreme difficulty of carrying on commerce in this way.

Money was introduced to obviate these difficulties, which it has done very completely. Every one being desirous to have the means of readily acquiring whatever he wanted, would endeavour to exchange a portion of his own produce for that which he observed was most in demand, and which passed most readily from hand to hand. By degrees this commodity would come to be used as a common medium of exchange, as a standard by which to measure the value of others, and as the equivalent given for them; in a word, it would become money.

An immense variety of commodities have been used as money in different countries and stages of society. But in civilized countries the precious metals have been uniformly used as such, to the exclusion of every other, except what is merely subsidiary to them. They have been indebted for this distinction, not to any law or agreement amongst nations, but to their qualities—their durability, divisibility, sameness, great value in small bulk, &c. Their employment as money dates from a very remote epoch. At first they were in an unfashioned form, in bars, ingots, or dust. They were speedily, however, formed into coins, or impressed with a stamp indicating their weight and fineness. Their use in the ordinary transactions of life was thus greatly facilitated; and they became the most convenient instruments that can be imagined for effecting exchanges, and gave an extraordinary stimulus to commerce.

It is, however, material to observe, that the use of coined money does not change the principle on which exchanges were previously conducted. The coinage saves the trouble of weighing and assaying gold and silver, but it does nothing more. It declares the weight and purity of the metal in a coin; but the *value* of that metal or coin is, in all cases, determined by those principles which determine the value of other things, and would be as little affected by being recoined with a new denomination as the burden of a ship by a change of her name.

Inaccurate notions with respect to the influence of coinage seem to have given rise to the opinion, so long entertained, that coins were merely the *signs* of values! But it is clear that they have no more claim to this designation than bars of iron or copper, sacks of wheat or any other commodity. They exchange for other things, because they are desirable articles, and are possessed of real intrinsic value. A draft, check, or bill, may not improperly, perhaps, be regarded as the sign of the money to be given for it; but that money is nothing but a commodity; it is not a sign, it is the thing signified.

The term *standard* is used to designate the purity and weight of coins, that is, the fineness of the metal of which they are made, and the quantity of it contained in them.

A pound troy, or 12 oz. of the metal of which English silver coins are made, contains 11 oz. 2 dwts. pure silver, and 18 dwts. alloy. This pound is coined into 66 shillings, so that each shilling contains 80.727 grains fine silver, and 87.27 grains standard silver; and the *money pound*, consisting of 20 shillings, contains 1614.545 grains pure silver, and 1745.454 grains standard silver. From 1600 down to 1816, the pound weight of standard silver bullion was coined into 62 shillings. All the English silver coins have been coined out of silver of 11 oz. 2 dwts. fine, from the Conquest to this moment, except for the short period of sixteen years, from the 34th Henry VIII. to the 2nd Elizabeth.

The fineness of gold is estimated by carat grains equivalent to 2½ dwts. troy; gold of the highest degree of fineness, or pure, being said to be 24 carats fine. The purity of our present gold coins is 11 parts fine gold and 1 part alloy. The sovereign, or twenty-shilling-piece, contains 113.001 grains fine gold, and 123.274 grains standard gold. The pound troy of standard gold is coined into 46 sovereigns and $\frac{29}{40}$ths of a sovereign, or into 46*l*. 14*s*. 6*d*. The mint or standard price of gold is, therefore, said to be 46*l*. 14*s*. 6*d*. per pound troy, or, 3*l*. 17*s*. 10½*d*. an ounce.

The alloy in coins is reckoned of no value: it is allowed in order to save the trouble and expense that would be incurred in refining the metals to their highest degree of purity; and because, when its quantity is small, it renders the coins harder, and less liable to be worn or rubbed. Were the quantity of alloy considerable, it would lessen the splendour and ductility of the metals, and would add too much to the weight of the coins.

Originally, the coins of all countries seem to have had the same denominations as the weights commonly used in them; and contained the exact quantity of the precious metals indicated by their name. Thus, the *talent* was a weight used in the earliest period by the Greeks; the *as* or *pondo* by the Romans; the *livre* by the French; and the *pound* by the English and Scotch; and the coins originally in use in Greece, Italy, France, and England, bore the same names, and weighed precisely a talent, a pondo, a livre, and a pound. The standard has not, however, been preserved inviolate, either in ancient or modern times. The necessities of governments, and the unfounded notion, so generally diffused, that coins derived their value rather from the coinage than from the quantity of metal contained in them, has everywhere led to their degradation. Coins have been less enfeebled in England than in any other country; but even here the quantity of silver in a pound sterling is less than the *third* part of a pound weight, the quantity it contained in 1300. At the union of the crowns, in 1600, the coins current in Scotland contained the *twelfth* part only of the silver they contained in 1296. In France, the livre current in 1789 contained less than *one sixty-sixth* part of the silver implied in its name, and which it had contained previously to 1103. In Spain, and some other countries, the degradation has been carried even further.

When two metals, as gold and silver, are formed into coins, and may be used indifferently, as legal tenders, in all payments, the proportion which the one bears to the other must be fixed by authority. But how accurately soever this proportion may be made to correspond with the real value of the metals, when it is fixed, it will not continue to be accurate for any considerable period. Each of the metals is liable to have its value affected by circumstances which may not affect the other; and whenever any variation of this sort takes place, it becomes the interest of all debtors to use that metal only which is *overvalued*, so that it becomes the only currency. In the French mint silver was for a long period overvalued, as compared with gold; and in England gold was for a long period overvalued, as compared with silver: and hence the reason that silver coins form almost the sole currency of France, and gold coins that of England. In this country a new system was, however, adopted in 1816. Gold coins were then declared to be the only legal tender in all payments of more than 40*s*.: and the weight of the silver coins being, as has been already remarked, at the same time diminished, they became a merely subsidiary currency. This system has been found to answer very well.

Copper coins are only legal tender to the extent of one shilling in any one payment: they are, in respect of silver, what silver coins now are in respect of gold.

(Tables are added to this treatise, giving a succinct view of the variations in the weight, fineness, and sterling value of the English coins at different periods; and of the value of the principal foreign coins now in circulation.)

But notwithstanding the precious metals are in many respects admirably fitted to serve as a medium of exchange, they have two very serious drawbacks—their cost, and the difficulty and expense of carrying them from place to place. If the currency of Great Britain consisted only of gold, it would amount to at least sixty millions of sovereigns; and the expense attending such a currency, allowing only ¼ per cent. for wear and tear and loss of coins, could not be reckoned at less than 3,250,000*l.* a-year. It is obvious, too, that were there nothing but coins in circulation, the conveyance of large sums from place to place, to discharge accounts, would be a very laborious process, and that even small sums could not be conveyed without considerable difficulty; and hence it is that most commercial and highly civilized nations have endeavoured to fabricate a portion of their money of less costly materials, and have resorted to various devices for economizing the use of coin. Of the substitutes for coin hitherto suggested, paper is by far the most important, and is in all respects the least objectionable. Instead of discharging their debts by a payment of the precious metals, individuals, on whose solvency the public may rely, pay them by giving a bill or draft for the sum, payable in coin at sight or at so many days after date; and as this bill or draft passes currently from hand to hand as cash, it performs all the functions of coin, while it saves its expense to the public. A sense of the advantages that might be derived from the circulation of such bills or drafts led to the institution of *banks* for their regular issue. A banker, on being applied to for a loan, does not make the advance in gold or silver, but in his own notes; and while these serve equally well as cash to the borrower, the issuer derives the same rate of interest from them that he would have derived from an advance of cash; his profits consisting of the excess of interest derived from the notes he has issued, over the interest of the cash or unproductive stock he is obliged to keep in his coffers to meet the demands of the public for payment of his notes, and the expenses of his establishment. Besides this sort of banks, there are also banks of deposit, or banks for keeping merchants' money. A merchant using a bank of this sort makes all his considerable payments by drafts upon his bankers, and sends all the bills due to him to them to be presented, and noted if not duly paid. By this means he saves the trouble and expense of keeping a quantity of unemployed money at home, of receiving coins or notes that are not genuine, and of making any mistakes with respect to the presentation of due bills; and in consequence of the saving of money that is thus effected, a much less quantity serves for the demand of the public.

But the great advantage of banks, in a commercial point of view, consists in the facility they afford for making payments at distant places, and for the negociation of bills of exchange. Many of the banking companies, established in different districts, have a direct intercourse with each other; and they have all correspondents in London. Hence, an individual residing in any part of the country, who may wish to make a payment in any other part, however distant, may effect his object by applying to the bank nearest to him. Thus, suppose A, of Penzance, has a payment to make to B, of Inverness. To send the money by post would be hazardous, and if there were fractional parts of a pound in the sum, it would hardly be practicable to make use of the post. How, then, will A manage? He will pay the sum to a banker in Penzance, and his creditor in Inverness will receive it from a banker there. The transaction is very simple: the Penzance banker orders his correspondent in London to pay to the correspondent of the Inverness banker the sum in question on account of B; and the Inverness banker, being advised in course of post of what has been done, pays B. A small commission, charged by the Penzance banker, and the postages, constitute the whole expense. There is no risk whatever; and the affair is transacted in the most commodious and cheapest manner.

Bills of exchange are most commonly used in the settlement of transactions between merchants residing in different countries; but they are also frequently used among merchants of the same country. They are merely orders addressed by a creditor to a debtor, directing the latter to pay his debt to some specified party in his vicinity. But notwithstanding this simplicity, their introduction has given unusual facilities and security to all sorts of mercantile transactions, and has been productive of much advantage to all classes. We borrow from the British Merchant (iii., p. 97,) the following exposition of the mode in which bills of exchange are employed to adjust debts in different places:—

'Suppose a tenant in Wiltshire has to pay 100*l.* of rent to his landlord in London; and that the woollen-draper in London has to pay the like sum to the clothier in Wiltshire: both these debts may be paid, without transmitting one farthing from the one place to the other, by bills of exchange, or by exchanging one debtor for the other; thus, the tenant may receive his landlord's order to pay 100*l.* to the clothier in the country; and the woollen-draper may receive his clothier's order to pay the like sum to the landlord in town. These two orders are properly called bills of exchange; the debts are exchanged by them; that is, the woollen-draper in town, instead of the tenant in the country, is become debtor to the landlord; and the tenant in the country, instead of the woollen-draper in town, is become debtor to the clothier; and when these orders are complied with, the two debts between London and the country are discharged without sending one shilling in specie from the one to the other.'

The debts due by merchants residing in one country to those of another are, for the most part, discharged in the same manner. The transmission of money from place to place is thus almost wholly avoided; and the largest payments are effected without the least risk and almost without any expense.

II. ***Weights and Measures.*** The employment of some sort of standards by which to measure and compare the specific gravities and magnitudes of different articles, must, at a very early period, have been seen to be indispensable to the easy and accurate arrangement of commercial transactions. The earliest standards of lineal measure seem to have been, for the most part, derived from portions of the human body: as the cubit, or length of the arm from the elbow to the tip of the middle finger; the foot; the *ulna*, arm, or yard; the span; the digit, or finger; the fathom, or space from the extremity of the one hand to the extremity of the other when they are both extended in opposite directions; the pace, &c.—Larger spaces were estimated by measures formed out of multiples of the smaller ones; and sometimes in days' journeys, or by the space which it was supposed a man might travel in a day, using a reasonable degree of diligence.

But lineal measures can only be used to determine the magnitude of surfaces or of solid bodies. The magnitude of bodies in a liquid or fluid state has to be determined by what are termed measures of capacity. It is probable that, in the infancy of society, shells, or other hollow instruments afforded by nature, were used as standards. But the inaccuracy of the conclusions drawn from referring to them must soon have become obvious; and it was early discovered that, to obtain an accurate measure of liquids, nothing more was necessary than to construct an artificial measure, the dimensions, and consequently the capacity of which should be determined by the lineal measures previously adopted by the society.

The determination of the specific gravity or weight of different bodies supposes the invention of the balance—an instrument of the highest antiquity. It appears probable that cubes of some common lineal measure, as a foot, or the fraction of a foot, formed of copper, lead, iron, or some other metal, were early used as standards of weight. In many countries, however, grains of corn seem to have formed the original standard. Hence in this, as well as in several other nations, the lowest denomination of weight is a grain; and thirty-two of these grains are directed, by the ancient statute *de compositio mensurarum*, to compose a penny-weight, twenty of which make an ounce, twelve ounces a pound, and so upwards.

The extension of commercial transactions must speedily have disclosed the importance of having weights and measures determined by some *fixed* standard. But as the size of the different parts of the human body differ in different individuals, it is necessary to select some durable article, a metallic rod, for example, of the length of an average foot, cubit, &c., and to make it the standard with which all the other feet, cubits, &c used in mensuration, should correspond. These standards have been preserved with the greatest care; at Rome they were kept in the temple of Jupiter; and among the Jews, their custody was entrusted to the family of Aaron.

In England, our ancient historians tell us, that a new, or rather a revised standard of lineal measure was introduced by Henry I., who ordered that the ulna, or ancient ell, which corresponds to the modern yard, should be made of the exact length of his own arm, and that the other measures of length should be raised upon it. This standard has been maintained without any sensible variation. In 1742, the Royal Society had a yard made, from a very careful comparison of the standard ells or yards of the reigns of Henry VII. and Elizabeth, kept at the Exchequer. In 1758, an exact copy was made of the Royal Society's yard; and this copy having been examined by a Committee of the House of Commons, and reported by them to be equal to the standard yard, it was marked as such; and this identical yard is declared, by the Act 5 Geo. IV., cap. 74, to be the standard of lineal measure in Great Britain.

The confusion and inconvenience attending the use of weights and measures of the same denomination, but of different magnitudes, was early remarked; and there is hardly a country in which efforts have not been made to reduce them to the same uniform system. Numerous acts of parliament have been passed having this object in view, and enjoining the use of the same weights and measures under very severe penalties. But, owing to the inveteracy of ancient customs and the difficulty of enforcing the new regulations, these statutes have always had a very limited influence, and the greatest diversity has continued to prevail, except in lineal measures. But the statute 5 Geo. IV., cap. 74, seems to have at length effected what former statutes had failed of accomplishing. It is, perhaps, indebted for its success in this respect to the limited nature of the changes which it introduced. It made no alteration in the lineal measures previously in use; neither did it affect the previously existing system of weights. The measures of capacity are the only ones which it has changed. The wine gallon formerly contained 231 cubic inches, and the ale gallon 282; but these have been both superseded by the imperial gallon, which contains 277¼ cubic inches.

As the standards adopted in most countries have been in a great degree arbitrary, it has long been the opinion of scientific men that, to construct a more perfect system of weights and measures, some natural and unchangeable basis should be adopted. It has, indeed, been contended by Paucton and Bailly, that the ancient measures had been deduced from a basis of this sort; and that the *stadium* always formed an aliquot part of the earth's circumference, that part differing amongst different nations and authors. But no learning or ingenuity can induce any reasonable person to believe what is so obviously incredible. The ancients had no means of determining the earth's circumference with anything like the accuracy required to render it the great unit of a system of measures; and, what is equally decisive, no ancient author ever makes the slightest allusion to any such standard.

In more modern times, however, the idea of seeking for a unit of measure and weight in some unchangeable natural object has been practically carried into effect. The standards that have been usually proposed for this purpose have been some aliquot part of the quadrant of the meridian, or the length of a pendulum vibrating seconds in some given latitude. The latter has been in so far adopted into the existing system of weights and measures, established by the Act of 1824, that the length of the standard yard, as compared with that of a pendulum vibrating seconds in the latitude of London, is determined to be in the proportion of 36 inches to $39\frac{1393}{10000}$ inches.

The new metrical system, established in France subsequently to the Revolution, is founded on the measurement of the quadrant of the meridian, or of the distance from the pole to the equator. This distance having been determined with the greatest care, the *ten-millionth* part of it was assumed as the *metre*, or unit of length, all the other lineal measures being multiples or submultiples of it in decimal proportion. The metre is equal to 39·3708 English inches; the gramme, or unit of weight, is a cubic centimetre, or the one-hundredth part of a metre of distilled water, of the temperature of melting ice, and weighs 15·434 grains Troy; the *litre*, or unit of the measures of capacity, is equal to 61·028 cubic inches. In 1812, the scientific precision of this system was so far relaxed, that the weights and measures founded upon the metre are allowed to be divided into halves, quarters, eighths, &c.

(See the Tables annexed to this Treatise, for an account of the values of the principal weights and measures of foreign countries.)

III. *Roads, Canals, &c.*—Next to the introduction of money, and weights and measures, the formation of good roads, bridges, and canals, gives the greatest facility to commerce, and contributes more powerfully, perhaps, than anything else to the progress of improvement. They have been denominated national veins and arteries; and the latter are not more indispensable to the existence of individuals, than improved communications are to a healthy state of the public economy. It were vain to attempt to point out in detail the various advantages derived from the easy means of communication that exist in Great Britain. There is not a single district that is not indebted to others for a large part of its supplies, even of some of the bulkiest commodities. Besides the coal, metals, minerals, timber, corn, &c., conveyed from one part of the empire to another by sea, immense quantities are conveyed from place to place in the interior, by roads and canals; and every improvement effected in the means of conveyance has obviously the same effect upon the cost of commodities that have to be conveyed, as an improvement in the methods by which they are raised or manufactured.

Wherever the means of internal communication are deficient in a country, the inhabitants must unavoidably disperse themselves over its surface. Cities were originally founded by individuals congregating more, perhaps, for the purpose of national defence and protection, than for any other cause. But in countries where good government is established, and property is secure, men resort to cities only from a sense of the advantages they afford. The scale on which business is there conducted presents facilities that cannot be elsewhere afforded for making a fortune; and the extent to which the subdivision of employments is carried opens a field for the exercise of all sorts of talent; at the same time that it improves and perfects all sorts of arts, whether subservient to industrious or scientific pursuits, or to those of pleasure and dissipation. It is this that attracts the aspiring, the industrious, the gay, and the profligate, to cities,—that fills them with the best and the worst part of the species. The competition that takes place in a great town,—the excitement that is constantly kept up, the collision of so many minds brought into immediate contact, and all endeavouring to outstrip each other in their respective departments, developes all the resources of the human mind, and renders a great city a perpetually radiating focus of intelligence and invention. There are, however, considerable clogs upon the continued increase of cities. The food and fuel made use of by the inhabitants, and the raw products on which their industry is to be exerted, must all be brought from the country; and according as the size of the city increases, the distances from which its supplies must be brought become so much the greater, that ultimately the cost of their conveyance may be so great, as to balance or more the peculiar advantages resulting from a residence in town. Hence the impossibility of a large, or even a considerable city existing anywhere without possessing considerable means of communication either with the surrounding country, or with other countries; and hence, too, the explanation of the apparently singular fact, of almost all large cities having been founded on or near the sea, or a navigable river. Had London been an inland town, fifty miles from the shore, it is abundantly certain that she could not have attained to one-third her present size; but the facilities afforded by her admirable situation on the Thames, for the importation of all sorts of produce from abroad, as well as from other parts of England, will enable her, should her commerce continue to prosper, to add to her colossal magnitude for centuries to come.

But all towns cannot be founded on the sea-coast or the banks of navigable rivers; and the growth of those in inland situations must, in all cases, depend on their means of communication with the surrounding country. Without our improved roads and canals, the great inland manufacturing towns with which England is studded, such as Manchester, Leeds, Birmingham, Sheffield, Bolton, Preston, &c., could not exist. They enable the inhabitants to obtain the rude products of the soil and the mines, almost as cheap as if they lived in country villages. There is thus nothing, or next to nothing, to detract from the advantages which the inventive and enterprising artisan may expect to realize from resorting to these great hives of industry. And, owing to the gigantic scale on which all sorts of industry are conducted in them, the scope afforded for the employment of the most powerful machines, and the appropriation of particular sets of workmen to every separate process, however minute, manufacturing industry is carried to a degree of perfection that almost exceeds belief.

The influence that the growth of a large town has upon agriculture is great and striking. 'In the neighbourhood,' says Dr. Paley, 'of trading towns, and in those districts which carry on a communication with the markets of trading towns, the husbandmen are busy and skilful, the peasantry laborious; the land is managed to the best advantage, and double the quantity of corn or herbage (articles which are ultimately converted into human provision) raised from it, of what the same soil yields in remoter and more neglected parts of the country. Wherever a thriving manufactory finds means to establish itself, a new vegetation springs up around it. I believe it is true, that agriculture never arrives at any considerable, much less at its highest, degree of perfection when it is not connected with trade; that is, when the demand for the produce is not increased by the consumption of trading cities.'—(*Moral Philosophy*, book vi. cap. 11.)

But the fact of their being mainly conducive to the growth of cities, is not the only advantage which improved roads and canals confer upon agriculture. Without their aid it would be impossible to carry to distant places sufficient supplies of such bulky and heavy articles as lime, marl, shells, and other manures, necessary to give luxuriance to the crops of rich soils, and to render those that are poor productive. Not only, too, would inferior roads lessen the market for farm produce, and consequently the quantity raised, but a larger proportional number of horses or other cattle would be required to convey the diminished produce to market. It is plain, therefore, that good roads are both directly and indirectly a prime source of agricultural improvement;—directly, by increasing the quantity, and reducing the cost of manure; and by increasing the quantity and reducing the cost of conveying farm produce to market; and, indirectly, by providing for the growth and indefinite extension of cities and towns, that is, of the markets for agricultural produce.

Increased speed of conveyance is one of the principal advantages that have resulted from the formation of good roads, the invention of steam-packets, &c. Suppose that it takes two days to travel by an uneven ill-made road between any two places; and that by improving the road, the journey may be accomplished in one day; the effect is the same as if the distance were reduced a half; and there is not only a great saving of time to travellers, but also a great saving from the more speedy conveyance of commodities. This latter is a point of much more importance than is commonly supposed. It is not possible to form any correct estimate of the value of the products that are constantly in the act of being carried from place to place in Great Britain and Ireland. It is certain, however, that it is very great; and every additional facility of conveyance, by bringing such products more rapidly to their destination, and enabling them to be sooner applied to the purposes for which they are intended, renders large quantities of capital available for industrious purposes, that would otherwise be locked up.

Roads of one sort or other must, of course, exist in every country emerged from barbarism,—but in England, the statute of the 28th of Philip and Mary, which is still in force, is the first legislative enactment in which a regular provision was made for the repair of the roads. The preamble to this statute declares, that the roads were tedious and noisome to travel on, and dangerous to passengers and carriages; and, therefore, it enacts, that in every parish two surveyors of the highways shall be annually chosen, and the inhabitants of all parishes obliged, according to their respective ability, to provide labourers, carriages, tools, &c., for *four* days each year, to work upon the roads, under the direction of the surveyors. This system, though in many respects exceedingly defective, was at the time justly considered a great improvement, and answered pretty well till the reign of Charles II., when, owing to the increase of carriages, particularly about London, it became necessary to adopt more efficient measures for the formation and repair of roads; and the plan of imposing tolls upon those who made use of the roads began then to be adopted. But this system was not carried into full effect, and placed upon a solid footing, till about 1767, when it was extended to the great roads to all parts of the country; the contributions of labour under the Act of Philip and Mary being then appropriated entirely to the cross or country roads. A money payment is also very frequently made instead of a contribution in labour.

When the plan for extending turnpike roads from the metropolis to distant parts of the country was in agitation, the counties in the neighbourhood of London petitioned Parliament against it, alleging, that the remoter counties would be able, from the comparative cheapness of labour in them, to sell their produce in London at a lower rate than they could do; and that their rents would be reduced, and cultivation ruined by the measure! Luckily this interested opposition proved ineffectual, and instead of being injurious to the counties adjoining the metropolis, the improvement of the roads has been quite as beneficial to them as to those at a distance, inasmuch as, by providing for the indefinite extension of the city, it has rendered it a far better market for their peculiar productions than it would have been, had its growth been checked, which must have been the case long ago, had the improvements in question not been made.

The plan of making and repairing roads by contributions of labour is not peculiar to England, but was at one period general all over Europe. By an Act of the Scotch Parliament, passed in 1669, all persons engaged in husbandry were obliged to labour six days each year, before or after harvest, upon the public roads; the farmers and landlords being, at the same time, obliged to furnish horses, carts, &c., according to the extent of land occupied by them. The inconveniencies of such a system are many and obvious. Those who get no pay for their work, and who perform it against their will, waste their time and industry; and there is besides a great loss incurred by the interruption of the regular pursuits of the labourer. A sense of these disadvantages led, in the early part of the reign of George III., to a commutation of the labour contribution for a money-tax on land, rated according to its valuation in the cess-books. This measure has been productive of the best effects. Previously to its taking place, the roads, even in the best cultivated districts of Scotland, were in the worst possible state; now, however, they are about the very best in Europe.

A similar system has been followed on the Continent. When Turgot entered on his administration, he sent a circular letter to the road-surveyors and engineers of the different provinces of France, desiring them to transmit estimates, framed on the most liberal scale, of the sums of money for which the usual repairs might be made on the old roads, and the ordinary extent of new ones constructed. The average of the estimates shewed that a money contribution of about 10,000,000 livres a-year would suffice for these objects: whereas Turgot shewed, that the execution of these repairs and constructions, by contributions of forced labour, or *corvées*, cost not less than 40,000,000 livres! —(*Art. Taxation, Supp. to Ency. Brit.*)

There is still, however, a great deal of labour performed on the cross and country roads of England, under the system established by the Act of Philip and Mary. Its continuance is most probably to be ascribed to the want of any ready means for its commutation.

It is the duty of Government to furnish assistance towards the formation of roads and bridges in parts of the country where they are necessary, and where the funds required for their formation cannot otherwise be obtained. But it is in such cases extremely desirable, in order to prevent Government from being deceived by interested representations, that those more immediately concerned in the undertaking should be bound to contribute a considerable portion of its expense. This has been done in the case of the Highland roads. Down to a very recent period, large tracts in the Highlands were quite inaccessible, and were, consequently, in a great measure shut out from all improvement; while the rugged nature of the country and the poverty of the inhabitants rendered any attempt to construct improved roads an undertaking beyond their means. Under these circumstances, Government came forward, and engaged to advance half the expense of making roads and bridges in certain districts, on condition that the landlords and others interested, should advance the other half, and that the work should be executed under the direction of Parliamentary Commissioners and engineers. This arrangement has been highly beneficial. Through its means about 600 miles of excellent roads have been constructed; and in consequence of the easy means of communication they afford, a spirit of improvement has been excited even in the wildest and least frequented districts.

Dr. Smith seems to have inclined to the opinion, that the roads of a country would be better attended to, and more economically managed, were they placed under the control of government, than when they are left to be planned and superintended by private individuals. But this opinion does not seem to rest on any good foundation. It is, perhaps, true that a few of the great roads between the principal towns of a county might be better laid out by government surveyors, than by surveyors appointed by the gentlemen of the different counties through which they pass. But these great roads bear but a very small proportion to the total extent of cross and other roads with which every county either is, or ought to be, intersected; and, besides, it is abundantly certain, that when the formation of the great roads is left, as in Great Britain, to the care of those, who, either by themselves or their tenants, have to defray the greater part of the expense of their construction and repair, they will be managed, if not with greater skill, at least with far more economy than if they were entrusted to the agents of government. M. Dupin has set this matter in the clearest point of view, in the remarks he has made on the administration of the roads in France and England. In the former they are entirely under the control of government, and the consequence is, that while there is a useless expenditure upon a few great roads, the cross-roads are almost entirely neglected, and the facilities of internal intercourse are incomparably inferior to ours.

It appears from a paper printed by order of the House of Commons, in 1818, that the length of the different paved streets and turnpike-roads in England and Wales, at that period, amounted to about 20,000 miles, and the length of the other highways to about 95,000 miles. The value of the labour performed in kind upon the roads is estimated, in the same paper, at 515,000*l.* a-year; the commutation money, paid for contributions of labour, is estimated at 271,000*l.*; and the average produce of the tolls is estimated at 570,000*l.*; making the total yearly expenditure upon all the roads of England and Wales, in 1818, to be, 1,356,000*l.* At this moment it may be estimated at 1,600,000*l.*

In fixing the rate of tolls, great care should be taken to keep them as low as possible. When they are either too much multiplied or too high, they have a very pernicious influence. They then operate as a most oppressive and unequal tax on commerce; and obstruct that very intercourse they are intended to furnish the means of promoting. The same remark is applicable to all sorts of dock and harbour dues, light-house dues, &c. When confined within due bounds they cannot justly be objected to; for nothing can be fairer than that those who benefit by such increased facilities and security in the prosecution of their businesses should pay for them. But whenever they exceed the proper limits, they tempt the navigator to resort to ports where the charges are lower, and to direct his course through more insecure but less costly channels.

It is not easy for those accustomed to travel along the smooth and level roads by which every part of this country is now intersected, to form any accurate idea of the difficulties the traveller had to encounter a century ago. Roads were then hardly formed; and, in summer, not unfrequently consisted of the bottoms of rivulets. Down to the middle of last century, most of the goods conveyed from place to place in Scotland, at least where the distances were not very great, were carried, not by carts or waggons, but on horseback. Oatmeal, coals, turf, and even straw and hay, were conveyed in this way! At this period, and for long previous, there was a set of single-horse traffickers (cadgers) that regularly plied between different places, supplying the inhabitants with such articles as were then most in demand, as salt, fish, poultry, eggs, earthenware, &c.: these were usually conveyed in sacks or baskets, suspended one on each side the horse. But in carrying goods between distant places, it was necessary to employ a cart, as all that a horse could carry on his back was not sufficient to defray the cost of a long journey. The time that the *carriers* (for such was the name given to those that used carts) usually required to perform their journeys, seems now almost incredible. The common carrier from Selkirk to Edinburgh, *thirty-eight* miles distant, required a *fortnight* for his journey between the two places, going and returning! The road originally was among the most perilous in the whole country; a considerable extent of it lay in the bottom of that district called Gala-water, from the name of the principal stream, the channel of the water being, when not flooded, the track chosen as the most level, and easiest to travel in.

Even between the largest cities the means of travelling were but little superior. In 1678, an agreement was made to run a coach between Edinburgh and Glasgow, a distance of forty four miles, which was to be drawn by *six* horses, and to perform the journey from Glasgow to Edinburgh and back again in *six* days. Even so late as the middle of last century, it took a day and a half for the stage-coach to travel from Edinburgh to Glasgow, a journey which is now accomplished in four and a half or five hours.

So late as 1763 there was but one stage-coach from Edinburgh to London, and it set out only once a month, taking from twelve to fourteen days to perform the journey! At present, notwithstanding the immense intercourse between the two cities by means of steam-packets, smacks, &c., six or seven coaches set out each day from the one for the other, performing the journey in from forty-five to forty-eight hours.—(*Robertson's Rural Recollections*, pp. 39—44.)

The effects of this extraordinary improvement in the means of travelling have been as striking on the manners as on the industry of all classes. The remark of Dr. Smith that 'man is the least transportable species of luggage,' is no longer true as applied to Great Britain. During spring the metropolis is crowded with visiters of all ranks and orders from the remotest provinces; and during summer and autumn vast numbers of the citizens are spread over the country. Hence it is, that manners as well as prices are reduced nearly to the same standard. A respectable family at Penzance or Inverness live very much in the same way as a respectable family in London. Peculiarities of all sorts have disappeared; everything is, as it were, brought to a level; the fashions and opinions of the metropolis are immediately diffused over every part of the country; while those that originate in the latter powerfully influence the former.

The safe and speedy conveyance of letters by post is one of the greatest services rendered to commerce, by the formation of good roads. An institution for the forwarding of letters and despatches, as well as of travellers, existed in Rome, under the name of *cursus publici*; but the post-office appears to have been instituted, for the first time in modern Europe, by Louis XI., in 1477. In this country the post-office was not established till the seventeenth century. Postmasters, indeed, existed in more ancient times: but their business was confined to the furnishing of post-horses to persons desirous to travel expeditiously, and to the despatching of extraordinary packets on special occasions. At length, after various abortive attempts for the same purpose, a post-office, or establishment for the *weekly* conveyance of letters to all parts of the kingdom, was instituted in 1649, by Mr. Edmund Prideaux, attorney-general to the Commonwealth.

From the establishment of the post-office down to 1784, mails were conveyed either on horseback, or in carts made for the purpose; and instead of being the most expeditious and safest conveyance, the post had become, at the latter period, one of the slowest and most easily robbed of any in the kingdom. In 1784 it was usual for the diligences between London and Bath to accomplish the journey in *seventeen* hours, while the post took *forty* hours; and on other roads the rate of travelling was in about the same proportion. The consequence was, that a very great number of letters was sent by other conveyances than the mail, the law to the contrary being easily evaded by giving them the form of small parcels.

Under these circumstances, it occurred to Mr. John Palmer, of Bath, comptroller-general of the post-office, that a very great improvement might be made in the conveyance of letters, in respect of economy, as well as of speed and safety, by contracting with the proprietors of the coaches for the carriage of the mail, the latter being bound to perform the journey in a specified time, and to take a guard with the mail for its protection. Mr. Palmer's plan encountered much opposition, but was at length carried into effect. The consequences have proved most beneficial. The use of mail-coaches has extended to every part of the empire; and while the mail is conveyed in less than half the time that was required under the old system, the coaches by which it is conveyed afford, by their regularity and speed, a most desirable mode of travelling. Mr. Palmer was the author of several other improvements in the economy of the post-office, and there is no other individual to whom this department owes so much.

It does not really seem, though the contrary has been sometimes contended, that the post-office could be so well conducted by any one else as by government. The latter alone can enforce perfect regularity in all its subordinate departments; can carry it to the smallest villages, and even beyond the frontier; and can combine all its separate parts into one uniform system, on which the public may rely, both for safety and despatch.

The same remark is applicable to the postage of letters that we have made with respect to tolls. It is quite reasonable and fair that those who use the post, or send letters by it, should pay the expense of their conveyance; and experience has shewn, that besides defraying this expense, the post-office may be made to yield a considerable revenue. But no additions ought ever to be made to the postage of letters without mature consideration. Nothing contributes more to facilitate commerce than the safe, speedy, and cheap conveyance of letters; and whatever has a tendency materially to lessen these advantages is hostile in the extreme to its interests.

The comparative cheapness with which goods may be conveyed by the sea or by means of navigable rivers, seems to have suggested, at a very early period, the formation of canals to the ancient Egyptians and other nations. In Great Britain, however, owing to the late rise of commerce and industry, and the insular situation of the country, no part of which is very distant from a navigable river, no attempt was made to construct canals till a comparatively recent period. Our first efforts for the improvement of internal navigation were directed to the deepening of rivers and removing the obstructions to their navigation. In 1635, a project was set on foot for rendering the Avon navigable from the Severn near Tewksbury, through the counties of Warwick, Worcester, and Gloucester. The civil war having broken out soon after, the project was abandoned, and does not seem to have been again revived. But after the Restoration, and during the earlier part of last century, Acts were at different times obtained for deepening and improving river navigation. For the most part, however, these attempts were not very successful. The current of the rivers gradually changed the form of their channels; the dykes and other artificial constructions were apt to be destroyed by inundations; alluvial sand-banks were formed below the weirs; in summer the channels were frequently too dry to admit of being navigated, while, at other periods, the current was so strong as to render it quite impossible to ascend the river, which at all times, indeed, was a laborious and expensive undertaking. These difficulties in the way of river navigation seem to have suggested the expediency of abandoning the channels of most rivers, and of digging parallel to them artificial channels, in which the water might be kept at the proper level by means of locks. The Act, passed in 1755, for improving the navigation of Sankey-brook, on the Mersey, gave rise to a lateral canal of this description, about eleven miles and a quarter in length, which deserves to be mentioned as the earliest effort of the sort in England.

But, before this canal had been completed, the celebrated Duke of Bridgewater, and his still more celebrated engineer, the self-instructed James Brindley, had conceived a plan of canalization independent altogether of natural channels, and intended to afford the greatest facilities to commerce, by carrying canals across rivers and through mountains, wherever it was practicable to construct them.

The Duke obtained his first Act, for making a canal from Worseley to Manchester, in 1759; and the extraordinary skill with which it was executed, and its complete success, led not only to the extension of the Duke's original plans, but to the formation and execution of a vast number of new projects. The impetus once given, has been continued; so that at this moment England is more amply provided with the means of internal communication by water, than any other country of Europe, with the exception of Holland.

The utility of canals is so very much akin to that of roads, that the remarks made on the former will equally apply to the latter. For the conveyance of heavy and bulky articles, such as coal, minerals, lime, manure, potatoes, &c. canals are preferable to roads. They are entitled to a very prominent place in any enumeration of the causes of the unprecedented advance of wealth and population in England during the last sixty or seventy years. They have given to almost all our considerable towns the command of an extensive inland navigation, and have consequently promoted their manufactures, commerce, and population, in a degree that is not easily imagined.

But great as the facilities afforded by the roads and canals hitherto in use have been, it is supposed by many that they will, at no distant period, be superseded by the general introduction of *rail-roads* and *locomotive* engines. The rail-road from Manchester to Liverpool is one of those undertakings that reflect the greatest credit on the enterprise of the country; and the performances of the engines upon it, in respect both of swiftness and power, are altogether astonishing, and go far to render space and time elements of very inferior importance in the calculations of the traveller. But the expense of constructing a rail-road, and of keeping it in repair, is very great; and the original cost and wear and tear of the engines are also very heavy items. It is reasonable, indeed, to suppose that this expense will be materially reduced, according as this new department of the science of engineering comes to be better understood; but, at present, it does not appear that rail-roads could be safely introduced, except between places not very distant, and which have an extensive intercourse together.

It is customary to insert provisions in the acts authorising canals to be cut, limiting the sum which the proprietors are to be entitled to charge upon the goods conveyed by them. But we think the dividend ought also to be limited; and that it should be stipulated, that whatever a moderate toll yielded over and above defraying this dividend, and providing for the repair of the canal, should be accumulated as a fund to buy up the stock of the canal, so that the toll may ultimately be reduced to such a sum as may suffice merely to defray the ordinary repairs, and the expense of towing. Were the possible dividend that the proprietors might divide so high as to afford them a sufficient inducement to embark their capital in the undertaking, we are not aware of any serious inconveniencies that could result from the adoption of such a plan, while it might be productive of very great advantages. Had the dividends upon the Grand Trunk Canal been limited to 20 or 25 per cent., there would not have been a single subscriber the less at the outset, and the canal would have been bought up long ago, and the expenses of transit upon it reduced to almost nothing. We would extend this principle to rail-roads, and most other undertakings where any exclusive privilege is given to the subscribers. Had it been attended to when the New River project was set on foot, the inhabitants of the metropolis would, during the last hundred years, have been supplied with water free of expense. To assign over to a few private individuals the power of making *unlimited profits* for an *unlimited period*, at the expense of the public, is a wanton sacrifice of their rights and interests. A limitation of profits to 15 or 20 per cent. would not, we are satisfied, occasion a single project to be abandoned, that would be carried into effect were the limitation withdrawn. It would give to enterprise a fair and ample reward; at the same time, that it would secure to the public a participation in such extraordinary gains as could not enter into the views of the projectors of any rational scheme.

The application of steam to the purposes of navigation has had a wonderful influence in facilitating commerce. Formerly it was not unusual for large fleets to be wind-bound for several days, and sometimes even weeks, in a port or roadstead, from which, had they been able to escape, they might have prosecuted their voyage. The employment of steam-vessels for the purpose of towing others out of port has effectually obviated this source of inconvenience and loss, and has enabled ships to get to sea as soon they are ready. In countries like Great Britain, which have a vast extent of sea-coast, steam-navigation is particularly important. Ordinary sailing-vessels may be prevented by adverse winds, for several days, from effecting even the shortest passage; but steam-ships make their way in defiance of every obstacle, and have given to voyages, from place to place, by sea, the expedition, and almost the regularity, of mail-coach travelling! 'These new and wonderful machines walk the water, like a giant rejoicing in his course,—stemming alike the tempest and the tide,—accelerating intercourse—shortening distances—creating, as it were, unexpected neighbourhoods, and new combinations of social and commercial relations; and giving to the fickleness of winds, and the faithlessness of waves, the certainty and steadiness of a high-way upon the land.'—(*Canning's Speeches at Liverpool.*)

But it is in river navigation that the influence of this new power will be principally felt. The difficulty of ascending rivers has hitherto been a great obstacle to their navigation; but happily the genius of Watt and Fulton has overcome this difficulty. The inmost recesses of Europe, America, Asia, and even Africa, have been rendered accessible to commercial enterprise. The Elbe, the Vistula, the Mississippi, the Amazon, the Euphrates, and the Nile, may now be safely and easily explored; and the commodities and products of the most distant countries conveyed to the heart of the Continents in which they have their source. The sea, which has been expressively termed the great highway of nations, has thus, as it were, received a vast extension; and the identical vessel in which an individual leaves the Thames, may convey him to Prague, the ruins of Babylon, the Andes, or the frontiers of Ethiopia.

In consequence of the general establishment of regular government, of the protection afforded to industry, and of the influence of those facilities to commerce we have thus briefly endeavoured to trace, it has, notwithstanding the counteracting circumstances to which we shall speedily call the reader's attention, been extended to every country of the world; all have felt its beneficial influence; all have been indebted to it for the principal part of the progress they have hitherto made in civilization; and all may expect, when the obstacles that still oppose its progress are removed, that it will accelerate their progress, and become a still more prolific source of industry and opulence.

Chapter IV.

General considerations as to the Freedom of Commerce—Origin of Restrictions—I. Restrictions originating in erroneous notions as to the Precious Metals—Balance of Trade.—II. Operation and Influence of Restrictions intended to promote Industry at Home.—III. Operation and Influence of Restrictions originating in Political Motives.

In the previous chapters we have endeavoured to lay before the reader a view of the rise and influence of commerce, and of the principal means by which it may be promoted. We have shown that the commercial intercourse carried on between the inhabitants of different districts of the same country, and those of different countries, is founded on that very principle which prompts each member of the same family, or each inhabitant of the same village, to apply himself to some one business. It would, therefore, seem that that *freedom* of commerce which is universally admitted to be productive of the most beneficial consequences when established between the occupants of different districts of the same country, must be equally so when established between those of different countries. It appears to be generally believed, that to occasion a commercial intercourse, nothing more is necessary than to remove such legal or physical obstacles as may interpose to prevent it. But this is not by any means enough. A, of Yorkshire, does not sell to or buy from B, of Kent, merely because there is nothing to hinder him from doing so; he must further believe that his interest will be promoted by the transaction: unless he do this, the utmost facility of exchanging will be offered to him in vain; nor will the finest roads or the speediest conveyances occasion the least intercourse. We neither buy nor sell for the mere pleasure of the thing. We do so only when we believe it will be a means of promoting some end, of procuring some peculiar advantage for ourselves that we could not have so easily procured in any other way. If any one supposed he could better attain his object in entering upon a commercial transaction with some particular individual, by entering upon a similar transaction with some one else, or by any other means, he would most certainly decline engaging in it. We may, and often do, make a false estimate of what is for our advantage; but its promotion is the mainspring of our actions; and it is it, and it only, that we have in view when we buy of a particular individual, or resort to a particular market, in preference to others.

Unless, therefore, it could be satisfactorily established that princes and rulers have a better understanding of what has a tendency to promote the wealth and industry of their subjects, than themselves, it is difficult to see on what ground any restriction on the freedom of commerce is to be vindicated. The person who buys French wine or Polish corn does so only that he may benefit himself; and the fair presumption is, that he does what is right. Human reason is, no doubt, limited and fallible; we are often swayed by prejudice, and are apt to be deceived by appearances. Still, however, it is certain that the desire to promote our own purposes contributes far more than anything else to render us clearsighted and sagacious. '*Nul sentiment dans l'homme*,' says the able economist, M. Say, '*ne tient son intelligence éveillée autant que l'intérêt personnel. Il donne de l'esprit aux plus simples.*' The principle that individuals are, speaking generally, the best judges of what is most beneficial for themselves, is now universally admitted to be the only one that can be safely acted upon. No writer of authority has latterly ventured to maintain the exploded and untenable doctrine, that governments may advantageously interfere to regulate the pursuits of their subjects. It is their duty to preserve order, to prevent one from injuring another; to maintain, in short, the equal rights and privileges of all. But it is not possible for them to go one step farther, without receding from the principle of non-interference, and laying themselves open to the charge of acting partially by some, and unjustly by others.

'The statesman,' says Dr. Smith, 'who should attempt to direct private people in what manner they ought to employ their capitals, would not only load himself with a most unnecessary attention, but assume an authority which could safely be trusted not only to no single person, but to no council or senate whatever, and which would nowhere be so dangerous as in the hands of a man who had folly and presumption enough to fancy himself fit to exercise it.'—(*Wealth of Nations*, vol. ii., p. 280.)

In every discussion as to any point of public economy, it is essential to bear in mind that the legislature abandons its duty, or rather acts in direct opposition to it, the moment it begins to legislate in the view of promoting the interest of particular classes. The question never ought to be, whether any proposed measure or regulation has a tendency to benefit agriculturists, manufacturers, or merchants; but whether its tendency be to benefit the public. Certain individuals or classes may be benefited by what is prejudicial to others; but it would be a contradiction to contend that a system of policy which enriches A by impoverishing B can be publicly advantageous. And it is upon this latter consideration that the attention of the legislature ought always to be fixed. Whatever has any tendency to increase the security of property, to perfect the divisions of labour, to stimulate industry and ingenuity, and to increase the wealth and comforts of *all* classes, deserves the encouragement of government. But when it goes further, and interferes to prohibit individuals from carrying on certain branches of trade that others may be promoted, it arrogates to itself that authority, the assumption of which is so justly censured by Dr. Smith. Such a prohibition is, in fact, quite subversive of the right of private property; for that right is violated, not merely when a man is unjustly deprived of any part of his fortune, but also when he is prevented from disposing of it in any way, not hurtful to others, he may think fit.

It does not, therefore, appear, considering this question on general grounds, that there is the shadow of a foundation for those commercial restrictions that make so prominent a figure in the policy of all modern nations. If it could be shown that statesmen and ministers were the best judges of the means by which those subject to their authority might improve their condition, the case would be different. But no such pretension is set up, and, if it were, it would be universally scouted. We may safely leave the conduct of individuals to be determined by their own prudence and sagacity. They act under the most serious responsibility; and we have the best attainable security—the plain and obvious interest of the parties—that they will, in the peculiar circumstances under which they are placed, follow that course which is most advantageous for themselves, or, in other words, for the community. All systems of policy that would regulate the pursuits of private persons according to the views of government, must be arbitrary and violent in their nature; and any attempt to act upon them could not fail to be productive of the most mischievous consequences. A wise government will confine its efforts to the maintenance of that order of things which Nature has established. It will not mix itself up with the affairs of its subjects, but will leave them to pursue their own interest in their own way; to bring their industry and capital into the freest competition with those of others; and will interpose only when they swerve from the rules of justice. Freedom and security are all that is necessary to stimulate industry, and to insure the most rapid advancement in the career of improvement.

We cannot, however, feel any surprise that these principles should have been so widely departed from, and that commerce, and, indeed, most sorts of industry, should be everywhere subjected to restrictions and regulations. They originated in a comparatively unenlightened age, before the genuine sources of public wealth, and the limits of proper interference on the part of governments, had been explored and defined. The fallacies on which most of them are founded, however obvious they may now seem, were not speedily or easily detected; and, after their hollowness has been exposed, the return to a better system is a work of extreme difficulty. Every regulation affecting the employment of capital and industry, though always injurious to the public, is, for the most part, productive of advantage to a greater or smaller number of individuals. The moment that any change is proposed, these persons lay before government the most exaggerated representations of the injury that would result from the abolition or modification of the regulation; and not satisfied with this, they most commonly enlist a portion of the press into their service, and, availing themselves of all the aid that sophistry and ingenuity can supply, labour to make the public believe that it is a national benefit, and that they are interested in its support! This device has very often been attended with the most complete success; and it is to this circumstance, more than anything else, that the tenacity with which erroneous theories in commerce are supported, is to be ascribed; and that sophisms, that have been again and again exposed, are put forward anew with as much seeming confidence as if they had never been questioned.

The origin of the greater number of the restraints laid upon commerce may be traced to one or more of the following sources:—*first*, to erroneous notions with respect to the precious metals, and the *balance of trade; second*, to well-meant but mistaken efforts to encourage industry at home; and, *third*, to political motives, to a desire to depress the industry of a rival nation, or to avenge prohibitions by prohibitions. We shall offer some observations on each of these classes of restrictions.

I. *Restrictions originating in erroneous notions as to the precious Metals—Balance of Trade.*—It may appear like a truism to state, that wealth does not consist in the abundance of gold and silver, but in the abundance of the various necessaries, conveniences, and enjoyments of human life. But though this be now universally admitted, the contrary opinion was long acted upon; and of those who allow that gold and silver are nothing but commodities, there are many who still think that their importation and exportation are determined by peculiar laws, and are productive of very different effects from the importation or exportation of any other species of produce.

The notions so long prevalent as to the paramount importance of the precious metals, naturally grew out of the circumstance of their having been almost everywhere selected, at a very early period, to perform the functions of money. Being used both as standards by which to determine the value of commodities, and the equivalents for which they were most frequently exchanged, they acquired, in consequence of this double function, an adventitious importance, not in the estimation of the vulgar only, but in that of persons of the greatest discernment. The simple and decisive consideration, that all buying and selling is really nothing more than the bartering of one commodity for another,—of a certain quantity of corn or cloth, for example, for a certain quantity of gold or silver, and *vice versâ*,—was entirely overlooked. The attention was gradually transferred from the end to the means, from the money's worth to the money itself; and the wealth of individuals and states was supposed to consist, not of the abundance of their disposable products, of the quantity or value of the products with which they could afford to purchase the precious metals, but of the quantity of these metals actually in their possession. Such is the flimsy and fallacious hypothesis on which the theories of most of the early commercial writers are founded; and such also is the hypothesis on which this and most other civilized countries at one time regulated their intercourse with each other! The grand object of governments has not been to facilitate production, but to monopolize the greatest supply of the precious metals. And as, in countries destitute of mines, these could not be obtained except in exchange for commodities sent abroad, various devices were resorted to for encouraging exportation, and preventing the importation of all commodities, other than the precious metals, that were not destined for future exportation. And thus it was that the prosperity of states came to be measured, not by the increase of their capital or population, by the rate of wages or of profits, or by their advancement in the useful and elegant arts; but by the *excess of the value of their exports over the value of their imports.* This excess was denominated a *favourable balance,* or a balance against the foreigner; and it was not supposed that he could cancel it, except by sending to the creditor country an equivalent amount of gold and silver, or of that which was then believed to be the only real wealth. When the imports exceeded the exports, the balance was said to be *unfavourable;* and it was concluded that a corresponding amount of bullion would have to be sent abroad, the nation being in consequence rendered so much the poorer!

It would be worse than useless to take up the reader's time by proving, what is now universally admitted, that gold and silver form only a very small portion of the wealth of every civilized country, and that it is in no respect necessary to take any extraordinary measures to force their importation, or to retain them at home after they have been imported. We shall content ourselves with showing that, though the theory of the *balance of trade* had not been founded on erroneous notions as to money, it was in other respects entirely fallacious. There are really no means by which any accurate estimate can be formed of the balance due to or by any particular country on account of its commercial transactions with others. Supposing, however, that it were correctly ascertained, it would be found, in opposition to the common opinion, that the value of the commodities imported generally exceeds the value of those that are exported; and that it is only in certain cases, and those of very rare occurrence, that a balance is cancelled by a bullion payment.

(1.) The proper business of the wholesale merchant consists in carrying the various products of the different countries of the world, from places where their value is least to those where it is greatest; or, which is the same thing, in distributing them according to the effective demand. It is clear, however, that there could be no motive to export any species of produce, unless that which it was intended to import in its stead was of greater value. When an English merchant commissions a quantity of Polish wheat, he calculates on its selling for so much more than its price in Poland as will be sufficient to pay the expense of freight, insurance, &c., and to yield beside the common and ordinary rate of profit on the capital employed. If the wheat did not sell for this much, its importation would obviously be a loss to the importer. It is plain, then, that no merchant ever exports but in the view of importing something more valuable in return. And so far from an excess of exports over imports being any criterion of an advantageous commerce, it is distinctly the reverse; and the truth is, notwithstanding all that has been said and written to the contrary, that unless the value of the imports exceeded that of the exports, foreign trade could not be carried on. Were this not the case, that is, were the value of the exports always greater than that of the imports, we should lose in every transaction with foreigners, and the trade with them would be speedily abandoned.

The rates at which exports and imports are officially valued, in England, were fixed so far back as 1696. But the very great alteration that has since taken place, not only in the value of money, but also in the cost of most commodities, renders this official valuation of no use whatever as a criterion of the true value of the exports and imports. In order to remedy this defect, an account of their *real* or *declared* value is annually prepared from the declarations of the merchants, and laid before Parliament. But even this is very far from accurate: most imported commodities being loaded with heavy duties, it is, speaking generally, the interest of the merchant to conceal and underrate their value; while, on the other hand, it is sometimes for his interest to exaggerate the value of those entitled to a drawback on being exported; and as few commodities are subject to a duty on exportation, it may be fairly presumed that their value is, if not overrated, at least stated at its full amount.

If perfectly accurate accounts could be obtained of the value of the exports and imports of a commercial country, there can be no manner of doubt that, in ordinary years, the latter would always exceed the former. The value of an exported commodity is estimated at the moment of its being sent abroad, and *before* its value is increased by the expense incurred in transporting it to the place of its destination; whereas the value of the commodity imported in its stead is estimated *after* it has arrived at its destination, and, consequently, after its value has been enhanced by the cost of freight, insurance, importer's profits, &c.

In the United States the value of the imports, as ascertained by the custom-house returns, always exceeds the value of the exports. And although our practical politicians have been in the habit of considering the excess of the former as a certain proof of a disadvantageous commerce, 'it is nevertheless true,' says Mr. Pitkin, '*that the real gain of the United States has been nearly in proportion as their imports have exceeded their exports.*' (*Commerce of the United States*, 2nd edit. p. 280.) The great excess of American imports has in part been occasioned by the Americans generally exporting their own surplus produce, and consequently receiving from foreigners not only an equivalent for their exports, but also for the cost of conveying them to the foreign market. 'In 1812,' says the author just quoted, 'flour sold in America for *nine dollars and a half* per barrel, and in Spain for *fifteen dollars*. The value of the cargo of a vessel carrying 5000 barrels of flour would, therefore, be estimated, at the period of its exportation, at 47,500 dollars; but as this flour would sell, when carried to Spain, for 75,000 dollars, the American merchant would be entitled to draw on his agent in Spain for 27,500 dollars more than the flour cost in America; or, than the sum for which he could have drawn had the flour been exported in a vessel belonging to a Spanish merchant. But the transaction would not end here: the 75,000 dollars would be vested in some species of Spanish or other European goods fit for the American market; and the freight, insurance, &c. on account of the return cargo, would probably increase its value to 100,000 dollars; so that in all the American merchant might have imported goods worth 52,500 dollars more than the flour originally sent to Spain.' It would be as reasonable to deny that such a transaction is advantageous, as it is to deny that its advantage consists entirely in the excess of the value of the goods imported over the value of those exported. And it is equally clear, that America might have had the real balance of payments in her favour, though such transactions as the above had been multiplied to any conceivable extent.

(2.) In the second place, when a balance is due by one country to another, it is but seldom that it is paid by remitting bullion from the debtor to the creditor country. If the sum due by the British merchants to those of Holland be greater than the sum due by the latter to them, the balance of payments will be against Britain; but this balance will not, and, in fact, cannot, be discharged by an exportation of bullion, *unless bullion be at the time the cheapest exportable commodity*; or, which is the same thing, *unless it may be more advantageously exported than anything else.* Let us suppose that the balance of debt, or the excess of the value of the bills drawn by the merchants of Amsterdam on London over those drawn by the merchants of London on Amsterdam, amounts to 100,000*l.*: it is the business of the London merchants to find out the means of discharging this debt with the least expense; and it is plain, that if they find that any less sum, as 96,000*l.*, 97,000*l.*, or 99,900*l.*, will purchase and send to Holland as much cloth, cotton, hardware, colonial produce, or any other commodity, as would sell in Amsterdam for 100,000*l.*, no gold or silver will be exported. The laws which regulate the trade in bullion are not in any degree different from those regulating the trade in other commodities. It is exported only when its exportation is advantageous, or when it is more valuable abroad than at home. It would, in fact, be quite as reasonable to expect that water should flow up-hill, as it is to expect that bullion should leave a country where its value is great, to go to one where it is low! It is never sent abroad to destroy, but always to find, its level. The balance of payments might be ten or a hundred millions against a country, without causing the exportation of a single ounce of bullion. Common sense tells us, that no merchant will remit 100*l.* worth of bullion to discharge a foreign debt, if it be possible to invest any smaller sum in any species of merchandise which would sell abroad for 100*l.*, exclusive of expenses. A dealer in the precious metals is as much under the influence of *self-interest* as a dealer in coffee or indigo; but who would attempt to extinguish a debt by exporting coffee which cost him 100*l.*, if he could effect his object by sending abroad indigo which cost only 99*l.*?

The argument about the balance of payments is one of those which contradict and confute themselves. As every country in the world, with the single exception of the United States, has its favourable balance, it follows, of course, that they must be paid by an annual importation of bullion from the mines, corresponding to their *aggregate amount.* But it is certain, that the entire produce of the mines, though it were increased in a tenfold proportion, would be insufficient for this purpose! This *reductio ad absurdum* is decisive of the degree of credit that ought to be attached to conclusions respecting the flourishing state of commerce drawn from the excess of exports over imports!

Not only, therefore, is the common theory with respect to the balance of trade erroneous, but the very reverse of it is true. In the *first* place, the value of the commodities imported by all countries which carry on an advantageous commerce (and no other will be prosecuted for any considerable period) invariably exceeds the value of those which they export. Unless such were the case, there would plainly be no fund whence the merchants, and others engaged in foreign trade, could derive either a profit on their capital, or a return for their outlay and trouble. And, in the *second* place, whether the balance of debt be for or against a country, that balance will neither be paid nor received in bullion, unless it be at the time the commodity, by the exportation or importation of which the account may be most profitably settled. Whatever the partisans of the doctrine, as to the balance, may say about money being a preferable product, a *marchandise par excellence*, it will never appear in the list of exports and imports while there is anything else with which to carry on trade or cancel debts, that will yield a larger profit, or occasion a less expense to the debtors.

Perhaps we might now leave this part of our subject; but erroneous notions as to the superior importance of the precious metals are still so very prevalent, that we hope to be excused for laying the following paragraphs from Dr. Smith's great work before the reader. They set the inefficacy of all attempts to force the importation of gold and silver, and to prevent their exportation, in the most striking point of view.

'A country that has no mines of its own must undoubtedly draw its gold and silver from foreign countries, in the same manner as one that has no vineyards of its own, must draw its wines It does not seem necessary, however, that the attention of government should be more turned towards the one than towards the other object. A country that has wherewithal to buy wine will always get the wine which it has occasion for; and a country that has wherewithal to buy gold and silver, will never be in want of those metals. They are to be bought for a certain price, like all other commodities; and as they are the price of all other commodities, sc all other commodities are the price of those metals. We trust, with perfect security, that the freedom of trade, without any attention of government, will always supply us with the wine which we have occasion for, and we may trust, with equal security, that it will always supply us with all the gold and silver which we can afford to purchase or to employ, either in circulating our commodities, or in other uses.

'The quantity of every commodity which human industry can either purchase or produce, naturally regulates itself in every country according to the effectual demand, or according to the demand of those who are willing to pay the whole rent, labour, and profits, which must be paid in order to prepare and bring it to market. But no commodities regulate themselves more easily or more exactly, according to this effectual demand, than gold and silver; because, on account of the small bulk and great value of those metals, no commodities can be more easily transported from one place to another; from the places where they are cheap to those where they are dear; from the places where they exceed to those where they fall short of this effectual demand. If there were in England, for example, an effectual demand for an additional quantity of gold, a packet-boat would bring from Lisbon, or from wherever else it was to be had, fifty tons of gold, which could be coined into more than five millions of guineas. But if there were an effectual demand for grain to the same value, to import it would require, at five guineas a ton, a million of tons of shipping, or a thousand ships of a thousand tons each. The navy of England would not be sufficient.

'When the quantity of gold and silver imported into any country exceeds the effectual demand, no vigilance of government can prevent their exportation. All the sanguinary laws of Spain and Portugal are not able to keep their gold and silver at home. The continual importation from Peru and Brazil exceed the effectual demand of those countries, and sink the price of those metals there below that in the neighbouring countries. If, on the contrary, in any particular country their quantity fell short of the effectual demand, so as to raise their price above that of the neighbouring countries, the government would have no occasion to take any pains to import them. If it were even to take pains to prevent their importation, it would not be able to effectuate it. Those metals, when the Spartans had got wherewithal to purchase them, broke through all the barriers which the laws of Lycurgus opposed to their entrance into Lacedemon. All the sanguinary laws of the customs are not able to prevent the importation of the teas of the Dutch and Gottenburgh East India companies, because somewhat cheaper than those of the British company. A pound of tea, however, is about a hundred times the bulk of one of the highest prices, sixteen shillings, that is commonly paid for it in silver; and more than two thousand times the bulk of the same price in gold, and consequently just so many times more difficult to smuggle.

'It is partly owing to the easy transportation of gold and silver from the places where they abound to those where they are wanted, that the price of those metals does not fluctuate continually like that of the greater part of other commodities, which are hindered by their bulk from shifting their situation when the market happens to be either over or under-stocked with them. The price of those metals, indeed, is not altogether exempted from variation, but the changes to which it is liable are generally slow, gradual, and uniform. In Europe, for example, it is supposed, without much foundation perhaps, that during the course of the present and preceding century they have been constantly, but gradually, sinking in their value, on account of the continual importations from the Spanish West Indies. But to make any sudden change in the price of gold and silver, so as to raise or lower, at once sensibly and remarkably, the money-price of all other commodities, requires such a revolution in commerce as that occasioned by the discovery of America.

'If, notwithstanding all this, gold and silver should at any time fall short in a country which has wherewithal to purchase them, there are more expedients for supplying their place than that of almost any other commodity. If the materials of manufacture are wanted, industry must stop. If provisions are wanted, the people must starve. But if money is wanted, barter will supply its place, though with a good deal of inconveniency. Buying and selling upon credit, and the different dealers compensating their credits with one another, once a month, or once a year, will supply it with less inconveniency. A well regulated paper money will supply it, not only without any inconveniency, but in some cases with some advantages. Upon every account, therefore, *the attention of government never was so unnecessarily employed, as when directed to watch over the preservation or increase of the quantity of money in any country.*' (*Wealth of Nations*, vol. ii. pp. 247-250.)

We are ready to admit that there is no complaint more common than that of a scarcity of money; but there are few so entirely destitute of foundation. It is not money that is deficient, but articles to offer for it. The man who has property rarely encounters any serious difficulty in exchanging it for money, or in raising loans upon it. However plentiful, but little money will ever find its way into the pockets of the poor. It is, like all valuable articles in universal demand, to be had by those who can afford to pay for it, and by none else. It is true, that were the quantity of money considerably increased, its value would be lowered, and it would be obtainable in exchange for less quantities of labour, or of other things, than previously. But except in so far as a

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fall of this sort might occasion a reduction of the fixed burdens affecting the industrious classes, it would be of no advantage to any one. Each individual knows that an increase of his own stock of cash will be much for his advantage; and hence money is universally coveted. But it is because the increase is peculiar—because it is the result of his superior industry, frugality, or good fortune—that it is so advantageous to him. Were every man's cash increased in the same proportion, no one would be the better for the change. Money is not the end of our exertions: it is the means only by which we are to arrive at our ends, or by which we are to increase our command over the necessaries and accommodations of human life. But supposing that every man's stock of money were suddenly doubled or trebled, then, as the prices of all sorts of services and commodities would be raised in the same proportion, we should be as far as ever from the attainment of our ends. More tickets or counters would be employed in estimating the value of property, and in transferring it from one to another, but it is needless to add that none would be the better on that account. Individuals are poor, not because there is little money in the country, but because they are destitute of property to give in exchange for money, or because, owing to changes of fashion, or something else, no one is inclined to buy the property they offer for sale. A man who has nothing to give for a hat, or nothing that the hatters will accept of, will not obtain it except by way of gift or charity, even though the markets were glutted with hats. The same is the case with gold, silver, and everything. How much soever the supply of the precious metals may be increased, their possessors will not part with them except for an equivalent; and such as are unable to offer it, must submit to be without them.

'Were all the gold in England annihilated at once, and one and twenty shillings substituted in the place of every guinea, would money be more plentiful, or interest lower? No, surely: we should only use silver instead of gold. Were gold rendered as common as silver, and silver as common as copper, would money be more plentiful, or interest lower? We may assuredly give the same answer. Our shillings would then be yellow, and our halfpence white; and we should have no guineas. No other difference would be observed; no alterations in commerce, manufactures, navigation, or interest; unless we imagine that the colour of the metal is of any consequence.

'Now, what is so visible in these greater variations, of scarcity or abundance, of the precious metals, must hold in all inferior changes. If the multiplying gold and silver fifteen times makes no difference, much less can the doubling or trebling them. All augmentation has no other effect than to heighten the price of labour and commodities; and even this variation is little more than that of a name. In the progress towards these changes the augmentation may have some influence by exciting industry; but after the prices are settled, suitable to the new abundance of gold and silver, it has no manner of influence.' (*Hume's Essay on Interest.*)

II. *Restrictions in favour of domestic Industry.*—The policy of allowing an unlimited freedom in the trade of the precious metals, though still regarded with jealousy by a great number of individuals, is now almost universally acknowledged by statesmen and legislators. But it is otherwise with that class of restrictions intended to promote domestic industry. In this respect, too, a very great advance has been made, particularly within the last few years, in a more liberal way of thinking. We believe, however, that the majority of well-informed persons, even in the most intelligent countries, are still strongly attached to the protective system, and conscientiously believe that the public interests may be materially promoted by absolutely prohibiting, or at least restricting, the importation of such articles from abroad as may be produced at home. A prejudice of this sort naturally, indeed, grows up in the breast of every man, and is not easily eradicated. The wealth which is expended in the purchase of foreign commodities seems as if it were so much taken from the means of supporting and employing our own countrymen. When an individual, for example, buys French silk and German linen, every one forthwith concludes that the demand for similar articles of home manufacture must be proportionally diminished, while not one in a thousand thinks of tracing the ultimate influence of the transaction. The supposed injury done to the British artisan is the only thing that is seen or attended to by the vast majority of those who reason upon such topics, or who, at least, undertake to decide as to their policy. And it is not to be wondered at that those who proceed upon such narrow grounds, who throw half the circumstances of the case entirely out of view, should be vehemently opposed to what appears, when thus partially considered, to be productive only of disastrous results. We freely confess that we are not the advocates of a liberal system of commercial policy because of its being generally advantageous to the different nations of the earth. That it is so, is certainly a powerful recommendation in its favour; but we are not cosmopolitans enough to defend it on this ground. And if it could be shown that the freedom of commerce, though beneficial to other countries, was really injurious to England, we should be the very last to propose the repeal or modification of any restriction. We differ with the defenders of the protective system about *means*, and not about *ends*. We are quite as little inclined as they are to advance the interests of others at the expense of our own people; and it is only because we are fully satisfied that the injury supposed to be done to the latter by the admission of foreign products is altogether imaginary, and that, in point of fact, their wealth and prosperity will be most effectually promoted by the unbounded freedom of commerce, that we are its uncompromising advocates.

In discussing the policy of restrictions on importation, it should be borne in mind, that they cannot be of the smallest service to any one engaged in the production of those articles in which the country enacting the restriction has a superiority, or which may be as cheaply produced there as in other places. And no one doubts, that by far the largest proportion of the employments in every extensive country are in this predicament—that they are either carried on under some peculiar advantage of soil, climate, or superior skill, or are in these respects on a par with those carried on in other countries; and in either case, it is not possible that they should sustain the least injury from the unrestricted admission of foreign products. Restrictions intended to prevent or fetter the importation of such articles would, indeed, be wholly inoperative. They are practically felt only when they affect products that cannot be raised at home, or that may be more cheaply imported from abroad.

It is obvious, on the first blush of the matter, that a policy of this sort contradicts all the principles that regulate the conduct of every prudent individual in private life. No one thinks of performing everything for himself, nor of making at home what it would cost him more to make than to buy. The tailor, as Dr. Smith has remarked, does not attempt to make his own shoes, but buys them from a shoemaker; the shoemaker, on his part, does not attempt to make his own clothes, but employs a tailor; and the farmer makes neither the one nor the other, but obtains them in exchange for corn and cattle. Each individual finds it for his advantage to employ himself in some particular business, and to exchange a part of his peculiar produce for such parts of the produce of others as he may have occasion for. And it is not very easy to see how that conduct, which is universally admitted to be wise and proper in individuals, should be foolish and absurd in the case of a state, that is, of the total number of individuals inhabiting a particular tract of country!

We are not aware that any one has gone so far as to contend, that the commerce carried on by different districts of the same country is disadvantageous to any of them; and yet, as was already remarked, it is not the mere freedom of dealing with each other that leads to an intercourse between different places—it is because all parties are sensible that their interests are promoted by it that it takes place. If any party imagined themselves injured by this traffic, it would be as absolutely put an end to, in so far at least as they are concerned, as if they were separated from the others by impassable mountains or morasses. And when such is the fact, when it is the promotion of their own interests, and nothing else, that leads individuals to engage in commercial enterprises, what is there to fear from giving the same freedom to the intercourse with foreign countries, as to that between different parts of the same country? Though the trade between France and England were as free as that between London and Newcastle, there can be no question that it would continue as limited as at present, unless the English, as well as the French, found it was for their advantage to extend their dealings.

But it is said, that the only class whose advantage is attended to in such cases, is that of the *consumers;* and that, though they may be benefited by an unrestricted intercourse with foreigners, the *producers* may be deeply injured. There is, however, very little ground for this distinction. Every individual is a consumer, and consumption is, besides, the sole end and purpose of production. It follows, therefore, that the interests of the consumers and those of the community are identical. Whatever promotes them, must, consequently, conduce to the public good—to that *salus populi* which it should be the grand object of all legislation to advance. In changing from a restricted to a free system, a few individuals may be injured in the same way that they are sometimes injured when new processes, or more powerful machines, are introduced. It is material, however, to observe, that the injury in every such case amounts to no more than a forced change of employments; for it will be shown, that to whatever extent the relaxation or repeal of a restriction on importation may lessen the demand for some species of produce raised at home, it unavoidably increases the demand for some other species in a corresponding proportion.

(1.) When a restriction is laid on the importation of any description of commodities previously brought from abroad, their price suddenly rises, and the home producers get an advantage; but what they gain in this way is plainly at the expense of their fellow-citizens, and is, besides, of trifling importance. For, additional capital being drawn to the business, prices are very soon reduced to the level that barely affords the ordinary rate of profit. Now, it is just possible, that this level may be identical with that at which prices stood previously to the restriction; but the probability is, that it will be considerably higher. If the former should happen to be the case, little, though something, will have been lost, but nothing whatever will have been gained by the restriction. By ceasing to import from the foreigner, we must also cease exporting to him; for the exports are, in all cases, merely the equivalents of the imports. All, therefore, that will have been accomplished by this measure will be the transference of capital from one employment to another. That equality of protection to which all individuals are justly entitled will have been encroached upon; the increase of one business will have been brought about by the depression of some other that was equally advantageous; but no addition will have been made to the capital of the country, or to the facilities for employing that capital with security and advantage.

But in the vast majority of cases, the price of an article imported from abroad is not the same after its importation is prohibited, but is permanently raised; for, if we could previously have produced it as cheaply as the foreigners, it would not have been imported. Instead of being obtainable, as before, for 1,000,000*l.*, the article will henceforth cost, perhaps, 1,200,000*l.*, or 1,500,000*l.* And it is obvious, that the effect of this artificial increase of price on the consumers of the article is precisely the same as if, supposing the trade to have continued free, a peculiar tax of 200,000*l.*, or 500,000*l.* a-year had been laid on them. But it will be observed, that had such a tax been imposed, its produce would have come into the hands of government, and would have formed a portion of the national income; whereas the increased cost of the article is, under the circumstances supposed, occasioned by an *increased difficulty of production*, and is, therefore, of no advantage to any one.

It consequently results, that even in those rare cases in which a restrictive regulation has no tendency to raise prices, it is hurtful, by changing the natural distribution of capital, and lessening the foreign demand for the produce of industry to the same extent that it increases the home demand. But in that incomparably more numerous class of cases in which a restriction occasions a rise in the price of the article which it affects, it is infinitely more injurious. Besides the mischief arising from varying the natural distribution of capital, and circumscribing the foreign trade of the country, such restriction has the effect of imposing a heavy burden on the people, for no purpose of general or public utility, but to produce a certain and grievous injury, by tempting individuals to withdraw from really advantageous businesses to engage in those that cannot be prosecuted without great national loss, and which must be abandoned the moment the prohibition ceases to be enforced.

'The natural advantages which one country has over another in producing particular commodities are sometimes so great, that it is acknowledged by all the world to be in vain to struggle with them. By means of glasses, hot-beds, and hot-walls, very good grapes can be raised in Scotland, and very good wine too can be made of them, at about thirty times the expense for which, at least, equally good can be brought from foreign countries. Would it be a reasonable law to prohibit the importation of all foreign wines, merely to encourage the making of claret and burgundy in Scotland? But if there would be a manifest absurdity in turning towards any employment thirty times more of the capital and industry of the country than would be necessary to purchase from foreign countries an equal quantity of the commodities wanted, there must be an absurdity, though not altogether so glaring, yet exactly of the same kind, in turning towards any such employment a thirtieth, or even a three-hundredth part more of either. Whether the advantages which one country has over another be natural or acquired, is, in this respect, of no consequence. As long as the one country has those advantages, and the other wants them, it will always be more advantageous for the latter nation to buy of the former than to make. It is an acquired advantage only which one artificer has over his neighbour who exercises another trade, and yet they both find it more advantageous to buy of one another, than to make what does not belong to their particular trades.' (*Wealth of Nations*, ii., p. 283.)

It is certainly true that, after an artificial system has been long acted upon, its abolition seldom fails of producing considerable temporary embarrassment and hardship; and for this reason no prudent government will ever rashly adopt any measure, how unexceptionable soever in point of principle, that might occasion any immediate and serious injury to a considerable class of its subjects. Every change in the public economy of a great nation ought to be cautiously and gradually effected. Those who have capital employed in businesses carried on under the protection of a restrictive regulation, ought to be allowed a reasonable time and every facility either to withdraw from them, or to prepare to withstand the free competition of foreigners,—but this is *all* they can justly claim. The fact of a departure having been made, on one or more occasions, from the sound principle of the freedom of industry, can never be alleged as a sufficient reason for obstinately persevering in a course of policy which has been ascertained to be most inimical to the public interests, or for refusing to embrace the earliest opportunity of reverting to a better system. To act on such a principle would be to perpetuate the worst errors and absurdities, and would be a proceeding utterly inconsistent with all the ends and objects of government.

It is but seldom, however, that governments have been open to the accusation of too hastily reverting to the sound principle of a free trade. They have, for the most part, been a great deal too prone to listen to the sophisms and misrepresentations of those who, in order to bolster up some particular privilege, exaggerate the loss that necessarily fellows the repeal of every prohibitive regulation. We deprecate all rash and capricious innovations; but we are not to reject an obvious improvement because a few individuals have, or, which is perhaps the most common case, believe they have, an interest in supporting the established order of things. The business of government is to make the interests of the few submit to those of the many; nor is there either sense or humanity in continuing to inflict an injury on the public, that a limited number of individuals may profit by a really disadvantageous business. This, however, has hitherto been the favourite policy of this and most modern nations; and no one, unless pretty conversant with the history of our commercial legislation, would easily imagine the extent to which this perverse practice is carried, and what a trifling amount of individual gain is admitted as a counterpoise to a heavy national loss. 'We submit to a loss exceeding probably a million sterling a year, occasioned by the restriction on the importation of Baltic timber, and voluntarily inoculate our houses with dry rot, lest saw-mills in Canada, and ships in the North American timber trade, the aggregate value of which does not amount to a million sterling, should become less productive to their owners. We prohibit sugar refined in the colonies, and consequently import it in a state more bulky and more perishable, lest the profits of a few sugar-refiners should be lessened. Other selfishness may be as intense; but none is so unblushing, because none is so tolerated, as that of a monopolist claiming a vested interest in a public injury.' (*Senior's Lectures on the Mercantile Theory*, p. 46.)

But without dwelling on such glaring instances, it is abundantly certain that the loss and inconvenience resulting from changes of commercial policy have been grossly exaggerated. All the great branches of industry carried on in every country depend on peculiarities of soil or climate, or on the genius of the people, and not on custom-house regulations. What should we have to fear from the abolition of all prohibitions? We export the produce of every one of our principal manufactures, as cotton, wool, iron, leather, &c., to every market of the world; so that the possibility of their being injured by the admission of similar articles from abroad is quite out of the question. Admitting, however, that the abandonment of the protective system might force a few thousand workmen to abandon their employments, it is material to observe that *equivalent new ones* would, in consequence, be opened to receive them, and that the aggregate demand for their services would not be in any degree diminished. Suppose that, under a system of free trade, we imported a part of the silks and linens we now manufacture at home, it is quite clear, inasmuch as neither the French nor Germans would send us their commodities gratis, that we should have to give them an equal amount of British commodities in exchange: so that such of our artificers as had been engaged in the silk and linen manufactures, and were thrown out of them, would, in future, obtain employment in the production of the articles that must be exported as equivalents to the foreigner. It is idle, therefore, to pretend that the repeal or modification of a restrictive regulation can ever be a means of diminishing the demand for labour. We may, by giving additional freedom to commerce, change the *species of labour* in demand, and make it be employed more profitably, but we cannot lessen its quantity. Should our imports this year amount to ten or twenty millions more than they did last year, we shall, it is certain, have to pay them by exporting an equally increased amount of our peculiar products. And, therefore, if *exportation* be desirable, and the most ardent admirers of the restrictive system admit it to be such, *importation* must also be desirable—for the two are indissolubly connected; and to separate them, even in imagination, infers a total ignorance of the most obvious principles. Commerce, whether carried on between individuals of the same or of different countries, is founded on a fair principle of reciprocity;—buying and selling are in it what action and reaction are in physics, *equal and contrary*. Those who will not buy from others, render it impossible for others to buy from them. Every sale implies an equal purchase, and every purchase an equal sale. Hence to prohibit buying is exactly the same thing, in effect, as to prohibit selling. No merchant would ever export a single bale of goods, were he prevented from importing a greater value in its stead. But it is impossible he can do this if foreign commodities be excluded. In whatever degree, therefore, an unrestricted trade might lead us to receive commodities from other countries, in the same degree it would render them customers for our commodities, would promote our manufactures and extend our trade. To suppose that commerce may be too free, is to suppose that labour may be turned into too productive channels,—that the objects of demand may be too much multiplied, and their price too much reduced; it is like supposing that our agriculture may be too much improved, and our crops rendered too luxuriant.

It is often affirmed, though we believe without the least foundation for the statement, that had it not been for restrictions on importation, several manufactures that now furnish employment for a considerable population, would, most probably, never have existed amongst us. But supposing this statement to be admitted, it would not form any valid objection to the principles now laid down. It is quite as much for the advantage of communities as of single families, to respect the principle of the division of labour. The interests of every people will always be best promoted by addicting themselves, in preference, to those branches of industry in which they have a superiority over others; for it is by this means only that they can ever fully avail themselves of their peculiar facilities of production, or employ themselves and their capital most beneficially.

When importation from abroad is restricted that some new or incipient manufacture may be promoted, government assumes, though perhaps unconsciously, that it knows better than its subjects what is the most profitable line for them to engage in. Never was there an assumption more entirely unfounded. Individuals are always on the alert to find out what are the most advantageous businesses in which to embark; and though they sometimes, no doubt, form erroneous conclusions, the chances are ten to one in favour of their being right. Were it otherwise, the number of well-advised and prosperous undertakings entered upon in all tolerably well-governed countries, would not, as is the case, infinitely exceed those of a contrary description. But though it were different, the interference of government would not certainly abate the evil. However well-intended, its attempts to introduce or extend some particular business cannot fail of being productive of immediate injury to others, while the object in view may never be realized; and though realized, it would most probably not be a national benefit, but the reverse. If, instead of directly producing linens, a manufacturer find it more profitable to produce cottons or hardware, and to exchange these with the Germans for linen, how ridiculous would it be to attempt to promote the public interests by shutting out foreign linens, and compelling them to be produced at home! It is not disputed that the linen manufacture might be somewhat promoted by such a measure; but it admits of demonstration that other and more advantageous businesses would sustain a more than corresponding depression. Governments may depend upon the fact, that their subjects are incomparably better informed with respect to these matters than they can ever be. It is not possible for them, do what they will, to interfere to encourage one set of producers, without at the same time, and by the same act, proportionally discouraging some other set. Their obvious duty is, therefore, to abstain from all interference with the legitimate pursuits of individuals. To the clamourers for protection they may always answer, that they would be happy to meet their wishes, provided they could do so without injuring others, but that that being impossible, they feel themselves bound not to interfere, but to allow every one to reap the profit or abide the loss of the speculations into which he may enter.

We may remark, by the way, that this doctrine has been strongly enforced in an able work published at Berlin, by M. Schmalz, one of the privy councillors of his Prussian majesty. 'Une fabrique véritablement utile,' it is there said:—'n'a pas besoin d'être encouragée ou soutenue par l'état. Il n'est pas nécessaire de stimuler les hommes pour qu'ils cherchent à se procurer un bénéfice quelconque; et toute fabrique qui a besoin, pour se soutenir, que l'état lui accorde un secours, est incontestablement défavorable; car c'est un indice certain qu'elle ne rapporte aucun bénéfice, et que le capital et le travail que l'on y emploie seraient employée plus utilement à tout autre genre d'industrie.'—(*Economie Politique*, ii. p. 144.)

Obvious as these principles are, the Prussian government has not had good sense enough to act upon them. Singular as it may seem, it is nevertheless true, that it is now, forgetful of what its subjects formerly suffered from the same cause, endeavouring to establish a Prussian, or in other words a 'continental system' in the north of Germany. Napoleon looked upon this system merely as a means of annoying England; but the Prussian cabinet appear to regard it as the most copious source of wealth. They have endeavoured, by means of customs' regulations, to create and extend several branches of industry. The exorbitant duties, for example, which have doubled the price of sugar, have, in Prussia as in France, led to the formation of several establishments for its manufacture from the beet-root. Thus far the system has succeeded; but mark the consequences. The sugar that Prussia imported from the West Indies and Brazil, was principally paid for by shipments of Silesian and Brandenburg linens; and the exportation, and consequently also the production, of these has declined precisely in proportion to the decline in the importations of the article for which they were exchanged! The result, therefore, is that of every shilling expended by the Prussians on sugar, a sixpence goes to enable the beet-root growers to carry on a business which does not pay its expenses; and that every atom of capital, and every labourer so employed, have been withdrawn from businesses, yielding without any encouragement a handsome profit to the undertaker, and a revenue to the state! Such is the system which Prussia is now labouring to force upon the smaller German states. Can we wonder at their disinclination to receive such a boon?

But it is unnecessary to cross the channel for illustrations of this sort of folly. The advocates of restrictions amongst us contend that the silk-manufacture owes its origin to them; but we take leave to say, that no allegation can be more perfectly ill-founded. The silk manufacture was established many years, had obtained a firm footing, and made a considerable progress, before any one of those regulations to which its rise is ascribed was enacted. But though it were otherwise, what then? Its non-introduction would have been a conclusive proof, either that we had no means of carrying it on as advantageously as others, or that we deemed it better to employ ourselves in those branches in which our superiority was more decided. In neither case would there have been less silk consumed than at present; but we should have obtained it on more advantageous terms; and while the interests of the consumers were thus promoted on the one hand, the interests of the producers would have been still more signally benefited on the other, inasmuch as the capital and labour now employed in the silk manufacture would have been vested in more productive channels.

The remarks now made are decisive with respect to the degree of attention that ought to be given to those who complain of the prevalence of a taste for foreign commodities, and endeavour to catch at a little ephemeral and worthless popularity by recommending the exclusive use of articles produced at home. It is fortunate that these recommendations, even when backed as they have sometimes been by the approval of the court, have generally been treated with merited contempt. Were they universally acted upon, they would annihilate our foreign commerce as effectually as if the country were surrounded by Bishop Berkeley's wall of brass. The truth is, that the individual who consumes nothing that is not imported from abroad, gives, by encouraging exportation, precisely the same stimulus to the industry of his own country that is given to it by those who consume nothing not directly produced at home. Nothing can be had from foreigners without sending abroad its full equivalent; they are not such simpletons as to supply us gratis with valuable produce; though, if they did, it is not very easy to see how it should injure us. If we wear French cloth, and drink French wine, an equivalent amount of British produce must be sent out of the country to pay for them; nor should we, by ceasing to consume foreign articles, increase in any degree the demand for those produced at home. All that we should do would be to add to the demand for those peculiar sorts of produce, or their substitutes, that had previously been imported from France; and it is as clear as the sun at noon-day, that we could not do this without occasioning an equal falling off in the foreign demand for that sort of British produce that had been exported to pay the French goods, or to obtain the gold and silver with which to pay them.

We borrow from the *Free Trade Advocate*, an American Journal, the following very striking illustration of the principles now advanced:—"Tell me which weighs most, that penknife or those three silver half-dollars," said a gentleman to us the other day. I took them in my hands, and pronounced them to be of equal weight. "That penknife," said my friend, "was made in Pittsburgh. It cost one dollar and a half, and is the product of American industry, which, you see, has given to a little piece of iron and a small piece of buck's horn a value equal to its own weight in silver." All the company present were struck with this apparently irresistible argument in favour of the "American system." That iron ore and horn should be made as valuable as silver, by domestic industry, appeared to be almost incredible; and yet the veracity of the owner of the penknife, admitted no doubt on the subject. Could there be any question as to the benefit which the nation would derive from making its own penknives? seemed to be asked by several of the listeners.

'To meet this cogent fact, which seemed to my friend so conclusive as to the soundness of the restrictive system of policy that he proposed to burn every book on political economy, Adam Smith and all, I also resorted to a fact. I took out of my pocket an English penknife, of the same weight as the American one, which had also cost a dollar and a half; and, having the two before me, expressed myself somewhat as follows:—"In the Pittsburgh knife I see the representative of a certain portion of American industry. I see the product of the labour of the miner, the coal-heaver, the smelter, the waggoner, the iron-master, the steel-maker, and the cutler. I see that the knife is the result of the combined labour of these and perhaps many others; and I also see that the knife has cost what is precisely equal to the wages of a man for three days, estimating this at fifty cents per day; in other words, I see that in order that the nation should possess that penknife, one man must labour for three days.

'"Now in the English knife I also see a portion of American industry. I see in it the product of the labour of the ploughman, the sower, the reaper, the thrasher, the miller, the woodcutter, the cooper, the waggoner, the factor, the merchant, the ship-builder the rigger, the sail-maker, the ship-smith, the ship-joiner, the plumber, the drayman, the mariner, and a dozen others who are employed in producing wheat, converting it into flour, and in transporting it abroad. All this is American industry, and is *only another mode of making a penknife.* It has, however, the advantage over the first mode. Were it not for the protecting duty, the English knife would cost but one dollar; or, in other words, the nation would procure it by the labour of one man for two days instead of three; and if it be for the interest of each individual that he should procure what he wants with the least possible quantity of labour, so must it be for the interest of *all* individuals, that is, the nation."' (Vol. i., p. 238.)

Take, therefore, any case of prohibition that it is possible to suppose: it will be found that, when it is least injurious, its whole effect is to change the natural distribution of capital, and to lessen the demand for one species of produce, to the same extent that it increases the demand for another; and that, in by far the greater number of cases, it has the further effect of increasing the price of the prohibited article, and of imposing a heavy burden on the consumers, or the public, without any countervailing advantage to any one. There is no jugglery in commerce—no denying of the fundamental principle that to whatever extent we cease buying from the foreigner, we *must*, to the same extent, cease selling to him. To attempt to promote industry by restricting importation, is to attempt to promote it by bolstering up a business not suited to the country, at the expense of one which is. We leave it to others to determine whether such conduct be more discreditable to our intelligence, or prejudicial to our interests.

(2.) Businesses carried on under a system of free competition cannot differ materially, in different countries, in respect of improvement. Where industry is not fettered by artificial systems, every one is exerting himself to improve his peculiar department, and is on the watch that he may learn and profit by the discoveries and inventions of his neighbours. But the moment that any employment is brought within the pale of custom-house regulations, those who carry it on trust to them, and not to their ingenuity. Believing that they have nothing to fear from foreign competition, they become indifferent to what is going on abroad; so that improvements that would otherwise be eagerly adopted and perfected, are either not introduced at all, or not until they have become antiquated.

'The time has been when it was found quite a sufficient reason for imposing a prohibitory duty upon a foreign article, that it was better than we could make at home; but I trust, when such calls are made upon this House hereafter, our first answer at least will be, let us see what can be done by competition; first try to imitate, and by-and-bye, perhaps, you will surpass your foreign rival. *Prohibitions are, in fact, a premium upon mediocrity:*—they destroy the best incentive to excellence—the best stimulus to invention and improvement. They condemn the community to suffer, both in price and quality, all the evils of monopoly, except in as far as a remedy may be found in the baneful arts of the smuggler. They have also another of the great evils of monopoly—that of exposing the consumer, as well as the dealer, to rapid and inconvenient fluctuations in price.'

In the same admirable speech, from which we have borrowed this striking extract, Mr. Huskisson gives the following example, in illustration of the principle he had advanced:—'Soon after the opening of the trade with France, under

Mr. Pitt's treaty, in 1786, French cloths, of a fine quality, were imported in considerable quantity—they were preferred to our own—no fashionable man was to be seen without a coat of French cloth. What followed? In less than two years the cloth of our own manufactures became equal to that imported from France—the one could not be distinguished from the other; and though coats of French cloth were still the fashion, *the cloth of which they were made was manufactured in this country!* In like manner, we shall now, in all probability import some printed cottons from Alsace and Switzerland, of richer and brighter colours than our own; some fancy muslins from India; some silk stuffs, some porcelain from France, objects for which curiosity or fashion may create a demand in this metropolis; but they will not interfere with those articles of more wide and universal consumption, which our own manufacturers supply cheaper and better, whilst they will excite the ingenuity of our artists and workmen to attempt improvements which may enable them to enter the lists with the foreigner in those very articles in which he has now an acknowledged superiority.'—(*Speeches*, vol ii. p. 344.)

The silk manufacture affords at once the best example of the pernicious effect of monopoly, and of the wholesome, invigorating influence of competition. Notwithstanding the unparalleled improvement in all other departments, it was affirmed, in 1826, by the Member for Coventry (Mr. Ellice), in his place in the House of Commons, 'that there were in that city 9,700 looms, 7,500 of which were in the hands of operative weavers, who applied their manual labour, as well as their machinery, to the manufacture of ribands. These looms were, for the most part, of the *worst possible construction;* and it would scarcely be believed that the improved loom in France would, in a given time, produce five times as much riband as the common loom in England with the same manual labour! He could also state that there existed an improved manufacture in Germany, by which one man could make *forty-eight times as much velvet as could be made in an equal time by an English machine.* What chance was there that the English manufacturer could maintain such a competition?'

Perhaps these statements may be somewhat exaggerated; though there can be no doubt that they are, in the main, well-founded. Surely, however, no one believes that the inferiority of the machinery used by the English manufacturers is to be ascribed to anything except that the protection which they enjoyed made them indifferent to improvements. No one believes that the French or Germans are superior to the English in the construction of machines; on the contrary, their inferiority is admitted by themselves, and by everybody else. But if it had been possible previously to entertain any doubt upon the subject, what has taken place since the opening of the ports to foreign silks under a duty of 30 per cent. would have effectually removed it. We do not exaggerate, we only state the plain matter of fact, when we affirm that the silk manufacture has made a more rapid progress during the last five or six years, or since the abolition of the prohibitive system in 1825, than it did during the preceding century. So unprecedented has been its advance, that 'the once existing disparity in quality between goods of French and English make has, with some very unimportant exceptions, not merely disappeared, but actually ranged itself on the side of the British artisan.'—(*Treatise on the Silk Manufacture, in Lardner's Cyclopædia*, p. 90.)

Most of the machines and processes known on the Continent, have been introduced amongst us, and many of them have been materially improved. Nor, after what has taken place, can the least doubt remain in the mind of any one, that had the same freedom been given to the silk manufacture fifty years ago that was given to it in 1825, it would now have ranked among the most important and valuable businesses in the kingdom, and would have had nothing whatever to fear from the admission of foreign silks free of duty. We know that it is the opinion of the most intelligent persons in the trade, that the existing duty of 30 per cent. on foreign silks ought to be immediately reduced to 20 per cent.; and that it should be further reduced by 1 per cent. per ann., till it be brought to 10 or 12 per cent., at which it might be allowed to continue stationary, not as a protecting duty, but as a duty imposed for the sake of revenue. A measure of this sort, by increasing *fair* competition, would continue the impulse already given to the manufacture, and excite to new efforts of invention. Under such a system, we are well assured that, in a very few years, perhaps not more than five or six, our superiority over France, in most departments of the silk manufacture, would be little less decided than in that of cotton.

'I maintain,' said Mr. Poulett Thomson, in his excellent speech on the state of the silk trade (14th of April, 1829), —a speech equally distinguished for soundness of principle and beauty of illustration,—'I maintain, without fear of contradiction, that the very essence of commercial and manufacturing industry is freedom from legislative interference and legislative protection. Attempt to assist its course by legislative enactments, by fostering care, you arrest its progress, you destroy its vigour. Unbind the shackles in which your unwise tenderness has confined it, permit it to take unrestrained its own course, expose it to the wholesome breezes of competition, you give it new life, you restore its former vigour. Industry has been well likened to the hardy Alpine plant: self-sown on the mountain side, exposed to the inclemency of the seasons, it gathers strength in its struggles for existence, it shoots forth in vigour and in beauty. Transplanted to the rich soil of the parterre, tended by the fostering hand of the gardener, nursed in the artificial atmosphere of the forcing-glass, it grows sickly and enervated, its shoots are vigourless, its flowers inodorous. In one single word lies the soul of industry—competition. The answer of the statesman and the economist to his sovereign inquiring what he could do to assist the industry of his kingdom was, "let it take its own way." Such is my prayer. Relieve us from the chains in which your indiscreet tenderness has shackled us—remove your oppressive protection—give us the fair field we ask, and we demand no more. The talent, the genius, the enterprise, the capital, the industry of this great people will do the rest; and England will not only retain, but she will take a yet more forward place in the race of competition for wealth and improvement, which, by the nature of things, she is destined to run amongst the nations of the world. Place us in that condition, not by any violent change, but by slow and easy transition. Here we shall find security for our enterprise, and reward for our labours—

'Hic patet ingeniis campûs; certusque merenti
Stat favor; ornatur propriis industria donis.'

It was not, however, to be supposed, that all departments of the silk manufacture would be equally benefited by the change of system that has taken place—*Non omnia possumus*. The probability is that the trade will in future be divided between the English and French. In point of substantial excellence, the plain silk goods manufactured in England are superior to those of France; and the difference in favour of the latter in point of *finish* is every day becoming less perceptible; while in all mixed manufactures of silk and wool, silk and cotton, silk and linen, &c., our ascendancy is admitted by the French themselves. On the other hand, the ribands, figured gauzes, and light fancy goods manufactured in France, are superior to those of this country. Even in this department we have made a very great progress; and fancy goods are now produced at Spitalfields, Coventry, and other places, contrasting most advantageously, in point of taste and beauty, with those produced previously to the introduction of the new system. Still, however, we are not sanguine in our expectations of our countrymen being able to maintain a successful competition with our neighbours in the manufacture of this class of articles. The greater attention paid to the art of designing in Lyons, the consequent better taste of the artists, and the superior brightness and lustre of their colours, give them advantages with which it will be very difficult to contend.

But, supposing that the trade is partitioned between the two countries in the way now stated, it is easy to see that the best share will belong to us, and that that share will be incomparably more valuable than the whole manufacture formerly was. The proofs of the accuracy of this statement are at hand. Notwithstanding the distress of the riband-weavers of Coventry and a few other places, the manufacture, taken as a whole, is rapidly increasing. The greatest importation of raw and thrown silk that took place in any one year previously to the repeal of the prohibitory system, was in 1823, when 2,432,286 lbs. were imported. But last year, in despite of all the sinister predictions that have been indulged in with respect to the ruin of the manufacture, the imports of raw and thrown silk amounted to 4,693,517 lbs., being nearly *twice the quantity imported when the monopoly was in its vigour!*

The increase in the exports of wrought silks affords, if possible, a still more decisive proof of the extraordinary improvement and extension of the manufacture. Instead of having anything to fear from the competition of the French at home, we are actually underselling them in the heavier and more important species of goods, in every foreign market equally accessible to both parties. The exports of silks from France have been declining, while those from England have been increasing beyond all precedent. The official value of our exports of silk goods, in 1823, amounted to 140,320*l.*, whereas in 1830, it amounted to 437,880*l.*, being *an advance of more than three hundred per cent.!* Not only therefore are the statements as to the ruin of the silk manufacture proved to be wholly without even the shadow of a foundation, but the anticipations of those who contended that the repeal of the restrictive system would be the commencement of a new era of invention and improvement, have been realized to the utmost extent.

What has now been stated renders it obvious, that though the manufacturers of fancy goods may be obliged to change their employment, a new, and at the same time a more extensive and fruitful field is opened for their exertions. We lament the hardships incident to the transition even from one department of the same business to another, but the suffering thence arising will speedily disappear; and when the change has been effected, the manufacturers will enter with fresh vigour on a new career of prosperity.

It is supposed by many, that the manufacture will ultimately be transferred from Spitalfields to Manchester, Paisley, and other places. We incline to think that this anticipation will be realized, at least to a considerable extent; but if so it will only prove that the places referred to are better adapted for its prosecution than Spitalfields, and consequently that the change is publicly advantageous.

Changes similar to those we have now been considering, are going forward at this moment in other businesses. The pillow-lace manufacturers are in a state of great, and, we are afraid, irremediable distress; but no one pretends to say that it has been occasioned by foreign competition. The Nottingham lace-manufacture, the value of which is now probably not less than *three millions sterling* annually, has grown up amongst us within the course of the last twenty years. This beautiful fabric is produced at so cheap a rate, that it is exported to every part of the world, and is extensively smuggled into France, superseding the laces for which the northern provinces of that kingdom were long so famous. This novel manufacture, which now affords employment for a large amount of capital, and many thousands of workmen, is wholly the result of inventions and improvements in machinery; and the perfection and cheapness of the goods it affords, by narrowing to a great extent the demand for pillow-lace, has gone far to suspend the production of the latter. But how injurious soever this change may be to many poor persons in Bucks, Bedford, and other counties, that derived a part of their subsistence from pillow-lace working, there can be no question that, in a public point of view, the change will be most beneficial. For every individual thrown out of the old business, two or three have been taken into the new, and are placed in a situation in which, while dexterity in manipulation is of equal value as before, the reward of those who have either sagacity or good fortune to discover more compendious processes, is incomparably greater.

The distress, prevalent in some departments of the silk-trade, springs from a similar cause, and will no doubt be followed by similar results. It is to be regretted that it is not possible either to abandon a routine system, or to introduce new and improved methods of production, without injury to individuals. But because such is the fact—because the bridge cannot be built without displacing watermen, nor the plough introduced without superseding the spade, nor wine brought from abroad without, diminishing the demand for ale and beer—is that any reason for proscribing inventions, and denying ourselves gratifications within our reach? To maintain the affirmative, would be evidently absurd,—it would be equivalent to maintaining that the interests of society are best promoted by perpetuating poverty, ignorance, and barbarism! The injury occasioned by the adoption of an improved method of production, or the opening of new markets whence cheaper supplies of any article may be obtained, is temporary only, and affects but a very small portion of the community; while the advantage is permanent, and benefits every individual, even those who it may, in the first instance, force to resort to other businesses.

Those unacquainted with the history of the silk trade, who may have looked into the pamphlets and speeches of those opposed to the late alterations, will probably be disposed to think that, though more limited in point of numbers, the condition of the workmen engaged in the trade was better previously to 1825, than it has been since. But those who have looked, however cursorily, into the history of the trade, must know that such is not the fact; and that, speaking generally, the situation of those engaged in it has been materially improved since 1825. The fact is, that the silk trade used to be exposed to the most tremendous vicissitudes. In 1793, no fewer than 4000 looms were shut up in Spitalfields only, which, when in full work seven years before, had given employment to 10,000 persons. In 1816, long before a relaxation of the monopoly system had been so much as thought of, the distress in the silk trade was infinitely more severe than it has ever been since the introduction of the new system. In proof of this we may mention that, at a public meeting held for the relief of the Spitalfields' weavers, at the Mansion House, on the 26th of November, 1816, the secretary stated, that *two-thirds* of them were without employment, and without the means of support; 'that some had deserted their houses in despair, unable to endure the sight of their starving families; and many pined under languishing diseases brought on by the want of food and clothing.' And Mr. Fowell Buxton, M.P., stated at the same meeting, that the distress among the silk manufacturers was so intense that '*it partook of the nature of a pestilence*, which spreads its contagion around, and devastates an entire district.' Such was the state of the workmen under that monopoly system that has been the worthless theme of so much recent eulogy. But such, we are glad to say, is not their state at present. The trade being now mostly diverted into those branches in which we have a superiority, is comparatively secure against revulsions; and it would be an absurdity to imagine, that measures that have about doubled the manufacture, should have reduced the rate of wages, or been otherwise than advantageous to the workmen.

(3.) But we have not yet seen the whole mischief of restrictions. When the importation of a foreign commodity is prohibited, or loaded with a heavy duty, it almost invariably happens, unless the commodity be a very bulky one in proportion to its value, that it is smuggled from abroad. If the prohibition of a foreign commodity took away the taste for it, or disposed any one cheerfully to pay double or treble its former price, the prohibition would be less injurious. Unluckily, however, it has no such effect. On the contrary, it would seem as if the desire to obtain prohibited articles acquired new strength from the artificial obstacles opposed to its gratification. And no one doubts that the desire to obtain them at a cheaper rate, becomes more intense according as their price is raised by the imposition of duties. The legal prohibition of foreign silks that existed previously to 1826, did not hinder their importation in immense quantities. The ingenuity of the smuggler was too many for the vigilance of the Custom-house officer—and at the very moment when the most strenuous efforts were made to exclude them, the silks of France and Hindostan were openly displayed in the drawing-rooms of St. James's, and in the House of Commons, in mockery of the impotent legislation prohibiting their introduction. We doubt, indeed, whether the substitution of the *ad valorem* duty of 30 per cent., in place of the old system of prohibition, has been productive of any materially increased importation of foreign silks. 'I have lately,' said Mr. Huskisson, in his famous speech in vindication of his policy as to the silk-trade, 'taken some pains to ascertain the quantity of smuggled silk that has been seized inland throughout the kingdom during the last ten years, and I find that the whole does not exceed 5000*l.* a-year. I have endeavoured, on the other hand, to get an account of the quantity of silk goods actually smuggled into this country. Any estimate of this quantity must be very vague; but I have been given to understand that the value of such goods as are regularly entered at the custom-houses of France for exportation to this country, is from 100,000*l.* to 150,000*l.* a-year; and this, of course, is exclusive of the far greater supply which is poured in throughout all the channels of smuggling, without being subjected to any entry. In fact, to such an extent is this illicit trade carried, that there is scarcely a haberdasher's shop in the smallest village of the United Kingdom, in which prohibited silks are not sold; and that in the face of day, and to a very considerable extent.

'The Honourable Member for Coventry (Mr. Ellice) has mentioned the silk goods from India as those against which anything but prohibition would prove an unavailing protection. Now, in my opinion, it is scarcely possible to conceive a stronger case than those very silks furnish, against the Honourable Member's own argument. I believe it is universally known, that a large quantity of Bandana handkerchiefs are sold, every year, for exportation, by the East India Company. But does any gentleman suppose that these Bandanas are sent to the Continent for the purpose of remaining there? No such thing! They are sold at the Company's sales to the number of about eight hundred thousand or a million a-year, at about four shillings each. They are immediately shipped off for Hamburgh, Antwerp, Rotterdam, Ostend, or Guernsey, and from thence they nearly all illicitly find their way back to this country.

'Mark, then, the effect of this beautiful system:—these Bandanas, which had previously been sold for exportation, at four shillings, are finally distributed in retail to the people of England, at about eight shillings each; and the result of this prohibition is to levy upon the consumer a tax, and to give those who live by evading your law, a bounty of four shillings upon each handkerchief sold in this country!'—(*Speeches*, Vol. II., p. 510.)

Indeed, one of the principal objections to the present duty of 30 per cent. on foreign silks, is, that it is high enough to enable a considerable smuggling trade to be still carried on,—the facility for smuggling being increased by means of the legalised importation. A duty of 12 or 15 per cent. would not, however, be so high as to balance the risks run in smuggling, and would, therefore, really afford the manufacturer a more efficient protection than he derives from the existing duty; at the same time, that it would place all classes of dealers on the same footing; whereas, the advantage is, at present, on *the side of those who engage in fraudulent schemes.*

But the duties of 600 or 700 per cent. on tobacco, and of 400 or 500 per cent. on foreign brandy and Geneva, are the grand incentives to smuggling. Have these exorbitant duties taken away the taste for the articles on which they are imposed? No such thing. Their only effect has been to convert a trade that would otherwise have been productive of the most advantageous results, into a most prolific source of crime and demoralization. The temptation to smuggle, occasioned by the oppressiveness of the duties, is too overpowering to be counteracted by the utmost threatenings of the law. The coast-guard, and the preventive water-guard, the expense of which is little, if anything, under 500,000*l.* a-year, are kept up for no other purpose than to hinder the importation of foreign tobacco, brandy, and Geneva. But though they were doubled, they would be ineffectual for their object. At this moment it is believed that a third of all the tobacco consumed in Ireland is supplied by the illicit trader. And on the coasts of Kent and Sussex, the districts in England most favourably situated for smuggling, almost the whole body of labourers are, every now and then, withdrawn from their accustomed employments, to engage in this destructive practice. It is hardly possible to exaggerate the mischievous consequences of this state of things. It has rendered smuggling, though probably the most direct road to the gallows, a favourite occupation; and procured for the smuggler, even when soiled with the blood of some revenue officer, the public sympathy and support. Thousands of individuals, who, but for this moral contamination, would have been industrious and virtuous, have become predatory and ferocious; they have been taught to despise the law, and to regard its functionaries as enemies, whom it is meritorious to assault.

It has been said, that this 'abominable system'—for so it is properly characterised by Mr. Huskisson (Speeches, vol. ii. p. 343)—is upheld for the sake of revenue; but this is false: it has been shown, again and again, that the revenue would be greatly increased by reducing the duties to a third or a fourth part of their present amount. Admitting, however, that fiscal rapacity and ignorance may claim the credit of having imposed a duty of 700 per cent. on tobacco, the still more objectionable duties on brandy and Geneva were originally imposed, and are still kept up, as mercantile regulations, as a means of compelling the consumption of a few thousand extra gallons of beer, porter, and British spirits; and to compass *this* end, we scruple not to subject our commerce with foreign countries to ruinous restrictions; to demoralize our population; to fill our courts with perjury and chicanery, and to render our coasts the scene of sanguinary contests! We admit the effect of interest in perverting the judgment even of the most conscientious persons; but we doubt whether any one, however largely engaged in the distillery, or in the beer and porter manufacture, was ever so far blinded by selfish feelings as to have no misgivings in contending that duties productive of such effects are publicly advantageous.

(4.) In addition to their other injurious effects, restrictions render the businesses carried on under their protection peculiarly liable to gluts and revulsions. Steadiness of price is always proportioned to the extent of the field whence supplies may be derived, and in which they may be disposed of. A manufacture not suited to the country, and depending on a prohibition for its existence, is necessarily limited by the extent of the home market. When the demands of the domestic consumer are satisfied, it has reached the utmost limits to which it can attain; for it would be idle to think of entering the foreign market in competition with those who carry on their business under more favourable circumstances. But when, in such a case, a change of fashion, or any other cause, occasions a decline in the demand for an article, there being no means of disposing of the surplus abroad, its price is unnaturally depressed, and the producers become involved in bankruptcy and ruin; whereas, had the article been produced under a free system, a falling off in the home demand would have been of trifling consequence, inasmuch as the surplus might have been sold, at a comparatively small reduction of price, in other countries.

It is of importance to observe, that the same results are sure to follow, though not so immediately, from an increase of the demand for any article produced under a monopoly, as from its diminution. A statement of this sort may seem, to those not conversant with such subjects, to be contradictory; but such is not the case. The inevitable effect of an increase of demand, even in the most extensive businesses, is to attract so much capital to them as not only to furnish an adequate supply of the article in unusual demand, at the old prices, but to glut the market, and sink prices below their ordinary level. And the more limited the market, the sooner, of course, is this reaction brought about.

The history of the corn trade, since the restrictive system was fully applied to it in 1815, furnishes convincing proofs of the truth of what has now been stated. We have had the most extraordinary alternation of periods of high and low prices; the one being the invariable forerunner of the other! And it is easy to see that it could not be otherwise. The restriction on importation, by raising our average prices decidedly above the level of those of the Continent, renders exportation, in an abundant year, all but impossible; so that prices, in such seasons, sink below the cost of production. But this fall cannot continue; for, the distress thence arising, by depressing the agriculturists and lessening the quantity of land in tillage, again leads to high prices; which, in their turn, lead to a renewed extension of cultivation, and a renewed fall the moment the harvest happens to be unusually luxuriant! Hence, in its application to agriculture, the prohibitive system is productive at one moment of scarcity, and at another of a glut; it hinders alike the supply of a deficiency, and the removal of a surplus; and has actually had power to render the bounty of Providence an injury to the farmer!

(5.) The pressure of taxation has often been alleged as an excuse for restrictions on commerce; but, though more plausible, perhaps, it is not more valid than the rest. Taxation may be heavy, and even oppressive; but so long as it is fairly assessed, it equally affects all branches of industry, and consequently affords no ground whatever for the enactment of regulations intended to protect a single business. If, however, any particular article were more heavily taxed than others, a duty corresponding to the *excess* of duty falling upon such article ought to be imposed on its importation from abroad, not as a measure of protection, but of justice; for otherwise, those engaged in its production would not be placed in the same situation as others, and would have good ground for complaining of unfair treatment—of their being disabled, by the *peculiarly heavy* taxes laid on them, from withstanding the competition of foreigners. So long, however, as taxation is impartial, as it presses with the same intensity on every class, all are placed in the same condition in respect of burdens, and none has any better right than another to complain of foreign competition. And it is surely unnecessary to say, that to propose to protect *all* businesses would be absurd. When a protection is granted to one class, they gain, for a while at least, a trifling advantage, at the expense of those whose produce was sent abroad to pay the foreign articles excluded by the protection. But universal protection would be neither more nor less than universal injury. Without being of the slightest advantage to any one, it would have the same mischievous influence on every department of industry that a particular restriction has on a single business. It would secure the home producers a monopoly of the home market; and would, consequently, in a great measure, put an end to that competition and emulation which are the grand sources of improvement. And if the protection were extended to businesses that *might* be carried on at home, as well as to those that are actually carried on, it would entirely extinguish foreign commerce, and throw us back into that state of poverty and barbarism from which we have only escaped by its powerful aid.

The same is true of comparatively high wages as of comparatively high taxes. They fall equally on the undertakers of all sorts of businesses. They do not bear more heavily on the manufacturers of silk and linen than on those of cloth and hardware; and if the former are to be protected because wages are high, the same protection must be granted to the latter, and not to them only, but to every other class, so that commerce would be wholly proscribed.

The fallacy of the plea set up for restrictions, on the ground now mentioned, may be set in a different point of view. It is said, that unless they were imposed, foreigners, having the advantage of low taxes and low wages, would gain an ascendancy in our markets, and glut them with products. But such statements carry with them their own refutation. We must never forget that commerce is nothing but an exchange of commodities; and that it is not possible to import either a great or a small quantity of foreign produce, without making an equivalent exportation of some species of home produce. The foreigner *must* buy from us to the same extent that we buy from him. And although, under a free system, some businesses might suffer, a proportional extension would be given to others that are more advantageous, and the capital and industry of the country would be turned into the channels in which they would be at once most secure and most productive. But suppose that, owing to high wages, high taxes, or any other cause, our products become higher priced than those of the foreigner, no regulations would then be required to shut the latter out of our markets. They will not, we may depend upon it, continue to be sent to us after we have become unable to pay them—that is, to furnish the foreigners with equivalent articles on more advantageous terms than they can supply themselves elsewhere. It is nugatory, therefore, to talk about protecting our manufacturers, agriculturists, &c., on the ground of their being disabled, by the heaviness of their burdens, from entering into competition with foreigners. Were such really their situation, they would enjoy, what Custom-house regulations can never afford, an absolute monopoly of the home market! Foreigners will never be found in countries where they can procure nothing cheaper than at home. They resort to those only where they are able to sell with advantage, or, in other words, where they find that abundance of commodities, suitable for their markets, may be had at comparatively *low* prices.

We have argued this point as if the assumption, that our taxes and wages are such as to lay our manufacturers under a relative disadvantage, were really well founded; and we have shown that it would, notwithstanding, be absurd to attempt to advance their interests by prohibitory enactments. We, however, are very far, indeed, from believing that the supposed disadvantage really exists. 'I know,' said Mr. Huskisson, 'it may be objected, that a great change has taken place in the situation of the British manufactures since the French treaty of 1786,—that we have been engaged in a long and expensive war, and that we have now to support the weight of a great many new and heavy taxes. I admit that such is the case: other countries, however, have not been exempted from the calamities of war; their taxes, too, have been increased; their burdens made to press more heavily. What is still more mischievous, in most of those countries, their commercial and manufacturing establishments have felt more directly the ravages and interruption of war; many of them have been violently swept away, whilst the capitals which they had called forth, if not confiscated, have been impaired or diminished by the exactions of military power. In this country no such calamity has been experienced. The trading capital of England remains entire; even during the war, it continued constantly increasing; and in respect to the comparative cheapness of labour in foreign countries, although by no means an immaterial part of the present consideration, it is not alone sufficient, as experience has shown, to make the balance preponderate in their favour. Since the invention of the steam-engine, coupled with the application of so many other discoveries, both in mechanical and chemical science, to all the arts of life, the mere estimate of manual labour is lost sight of, in comparison with that of the creative powers of mind. It is the union of those powers, and the great capitals which call them into action, which distinguishes British industry, and has placed it in the commanding situation which it now holds in the world. To these advantages are joined that energy and continuity of enterprize, that perseverance and steadiness of exertion, which, even by our rivals, are admitted to belong to the English character. It is upon these qualities, and these advantages, much more than upon any system of bounties and protecting duties, that I rely with confidence for the maintenance and improvement of the station which we now occupy among the trading communities of the world.'—(*Speeches*, Vol. II., p. 346.)

But we doubt whether, in point of fact, we, as a commercial people, labour under any disadvantage arising out of comparatively heavy taxes or high wages. As respects the former, it is the practice, whenever a commodity is about to be exported, to allow the exporter a drawback equivalent to the various duties that have been paid upon it; so that however these may affect the consumers at home, they have no influence on its price when exported. Wages, if estimated by the day, are perhaps higher in Great Britain than in most European countries; but this is no test of their real comparative magnitude. The question is not, whether wages estimated by the day, the week, or the month, be higher in Manchester or Rouen, but whether a *given quantity of work* costs more in the former than in the latter; for, it is plain that greater skill, dexterity, or perseverance on the part of workmen may more than balance a considerable apparent excess of wages. And such we are assured, by the highest practical authorities, is really the fact; and that when wages are estimated not by time, but by the quantity of work done, they are *decidedly lower* in England than in any continental state.

But it is useless to enlarge on what is so obvious. Every one knows that there is not so much as the shadow of a foundation for the statement that our manufacturers have anything to fear from foreign competition. How, if such were the case, do we contrive to export and sell with advantage British produce of the value of no less than *thirty-six* or *forty* millions? It is really too much, when our manufactures are in demand everywhere from China to Peru, to attempt to vindicate a ruinous and oppressive system of policy, on pretence of protecting them against foreign competition!

(6.) However much the apologists of restrictive regulations may be inclined to dispute the policy of purchasing commodities in the cheapest markets, they have not presumed to question the advantage of selling those we have to dispose of in the dearest markets. They would, however, do well to recollect, that it is not possible to sell in the latter without buying in the former. An article sells at a high price when a comparatively large supply of something else is got in exchange for it, and conversely. Suppose that by sending a certain quantity of cottons or hardware to Brazil, we get in return 150 hogsheads of sugar, and that the same quantity of cottons and hardware, if sent to Jamaica, would only exchange for 100 hogsheads, is it not obvious that by preventing the importation of the former, we force our goods to be sold for *two-thirds* of the price they would otherwise have brought? It might as well be contended, that things that are equal to the same thing are *unequal*, as that a system productive of such results is a means of increasing public wealth.

It would be useless to dwell at any greater length on this part of our subject. Restrictions intended to promote domestic industry have, in *all* cases, a directly opposite effect. They change the natural distribution of capital; force it into less profitable channels, encourage smuggling, and increase hazard. There is hardly, in fact, an evil incident to commercial speculation, of which they are not productive. The mischief too which they occasion is pure and unalloyed with a single countervailing advantage. They are as impotent to protect as to promote. Were they carried to their full extent—to the extent to which they ought to be carried were they really bottomed on sound principles—they would extinguish commerce and the arts, and reduce mankind to primæval barbarism.

II.—We think the foregoing conclusions must carry conviction to the mind of every unprejudiced reader; but as the subject is so very important, we shall, at the risk of being deemed tedious, endeavour to strengthen them still further by showing what have been the effects, on a large scale, of the practical working of the protective system. In France it has been carried to an extent, and enforced with a steadiness of purpose, not often paralleled; and we defy any one to show that it has had a single beneficial result. It has, no doubt, bolstered up a few branches of industry, for the prosecution of which France has no natural advantage, and in which she must always be inferior to others; but it has at the same time done the most serious injury to all the great sources of her wealth, to all those great branches of industry in which she has no equal. It has deprived her of all her peculiar advantages, and has given her nothing in return that she had not better be without.

France is not only extremely well situated for carrying on an extensive intercourse with foreign countries, but she is largely supplied with several productions which, were her commerce unfettered, would meet with a ready and advantageous sale abroad, and enable her to furnish equivalents for the largest amount of imports. The superiority enjoyed by Amboyna in the production of cloves is not more decided than that enjoyed by France in the production of wine. Her claret, burgundy, champagne, and brandy, are unrivalled, and furnish of themselves the materials of a vast commerce. Indeed the production of wine is, next to the ordinary business of agriculture, by far the most extensive and valuable branch of industry in France. It is estimated by the landholders and merchants of the Gironde, in the admirable *Pétition et Mémoire à l'Appui* presented by them to the Chamber of Deputies in 1828, that the quantity of wine annually produced in France, amounts, at an average, to about forty millions of hectolitres, or 1060 millions of gallons; that its value is not less than from 800 to 1000 millions of francs, or from thirty-two to forty millions sterling; and that upwards of three millions of individuals are employed in its production. In some of the southern districts it is of paramount importance. The population of the Gironde, exclusive of Bordeaux, amounts to 432,839 individuals, of whom no fewer than 226,000 are supposed to be directly engaged in the cultivation of the vine.

Here then is a branch of industry in which France has no competitor, which even now affords employment for about a tenth part of her population, and which is susceptible of indefinite extension. The value of the wines, brandies, vinegars, &c., exported from France at an average of the three years ending with 1790, amounted to about fifty-one millions of francs, or upwards of *two* millions sterling. The annual exports of wine from Bordeaux only exceeded 100,000 tuns; and as the supply of wine might be increased to almost any amount, France has, in this single article the means of carrying on the most extensive and lucrative commerce. 'Le gouvernement Français,' says M. Chaptal, in his work *Sur l'Industrie Française*, 'doit les plus grands encouragemens à la culture des vignes, soit qu'il considère ses produits relativement à la consommation intérieure, soit qu'il les envisage sous le rapport de notre commerce avec l'étranger, *dont il est en effet la base essentielle*.'

But instead of labouring to extend this great branch of industry, government has consented to sacrifice it to the interest of a few individuals engaged in businesses which cannot be prosecuted except at a heavy loss. During the ascendancy of Napoleon, or rather during the period of the continental system, France being thrown, as it were, upon her own resources, was obliged directly to produce several articles she had previously been in the habit of importing from abroad. Among others may be specified iron and sugar. Owing to the want of good coal mines, and improved means of communication, France can never expect to produce iron at the same rate at which it may be produced in England or Sweden; but being obliged, during the annihilation of her foreign trade by the anti-commercial policy of Napoleon to produce it at whatever cost, the iron trade was greatly extended, and many new furnaces were opened. The same was the case with the manufacture of beet-root sugar. Under ordinary circumstances it would not have been attempted; but during the continental system, when colonial sugar was selling at Paris for about *ten* times its ordinary price, many beet-root establishments were formed. As soon, however, as peace had been restored, and the ancient channels of commerce with France were re-opened, it was obvious that those businesses that had either grown up, or been unnaturally extended during the suppression of all intercourse with foreigners, would be swept off. In such a case, perhaps, government would have been warranted in making, not a compensation, but a *donation* to the sufferers. But the ministers of the restored dynasty did not view the new establishments in this light. They did not consider them as exotics that had grown up in hot-beds and under glasses, and had no real root in the soil, but as indigenous plants which, with a little more forcing, might be rendered healthy and luxuriant. They, therefore, determined, at all hazards, to avert the destruction of the businesses in question; and, in attempting to do this, carried the anti-commercial system to an extent Napoleon had never dreamed of. To bolster up the beet-growers and iron-founders, they did not scruple to sacrifice the interest of the wine and brandy growers, and the silk-manufacturers — policy about as wise as if the British government were to seek to advance the interests of the copper-plate engravers by the ruin of the woollen or cotton trade. We do not, indeed, suppose that the ministers of Louis believed that this would be the effect of their measures. Theirs is only one instance among thousands that might be specified to prove that ignorance in a minister is hardly less injurious than bad intentions. They seem to have supposed that impossibilities might be reconciled, and that foreign markets might be opened for the reception of the products of France, though the ports of France were shut against the importation of commodities from the foreigner. Government seems never to have made the reflection, apparently not a very recondite one, that notwithstanding the bounty of nature, wine was not gratuitously produced in France, and could not therefore be exported but for an equivalent. But those whose interests were at stake did not fail to apprise them of the hollowness of their system. In 1814 and 1822, when cottons and woollens were excluded, and enormous additions made to the duties on foreign iron, sugar, linens, and most other products, the merchants of Bordeaux, Nantes, Marseilles, and other great commercial cities, and the wine-growers of the Gironde, and some other departments, presented petitions to the Chambers, in which they truly stated, that it was a contradiction and an absurdity to attempt selling to the foreigner without, at the same time, buying from him; and expressed their conviction that the prohibitions and duties in question would be fatal to the commerce of France, and ruinous to the wine-growers and silk-manufacturers. These representations did not, however, meet with a very courteous reception. They were stigmatised as the work of ignorant and interested persons. The Chambers approved the policy of ministers, or, which is the same thing, they decided that the public interests would be best promoted by securing a trifling advantage to 80,000 or 100,000 persons, though, in doing so, they might have foreseen, and were forewarned, that they could not fail of deeply injuring *three or four millions!* The event has shown that the anticipations of the merchants were but too well founded. There is a discrepancy in the accounts laid before the late *Commission d'Enquête* by the French government, and those given in the above-mentioned *Pétition et Mémoire à l'Appui* from the Gironde. According to the tables printed by the *Commission* the export of wine from France is, at this moment, almost exactly the same as in 1789. It is, however, plain, that, had there not been some powerful counteracting cause in operation, the export of wine ought to have been very greatly augmented. The United States, Russia, England, Prussia, and all those countries which have at all times been the great importers of French wines, have made prodigious advances in wealth and population since 1789; and had the commerce with them not been subjected to injurious restrictions, there is every reason to think that their imports of French wine would have been much greater now than at a former period.

But the truth is, the accounts laid before the *Commission* are entitled to extremely little credit. In so far as respects the exports of wine from Bordeaux, which has always been the great market for this species of produce, the statements in the *Mémoire à l'Appui* are taken from the Custom-house returns. Their accuracy may, therefore, be depended upon; and they show an extraordinary falling off. Previously to the Revolution, the exports amounted to 100,000 tuns a year (*Peuchet, Statistique Elémentaire*, p. 138); but since 1820 they have only been as follows:—

1820	61,110 tuns.
1821	63,244
1822	39,955
1823	51,529
1824	39,625
1825	46,314
1826	48,464
1827	54,492

It is also stated that a large proportion of these exports has been made on speculation; and that the markets of Russia, the Netherlands, Hamburgh, &c. are glutted with French wines, for which there is no demand. 'Dans ce moment,' (25th April, 1828,) it is said in the *Mémoire*, 'il existe en consignation à Hambourg, 12,000 à 15,000 barriques de vin pour compte des propriétaires du département de la Gironde, qui seront trop heureux s'ils ne perdent que leur capital.'

This extraordinary decline in the foreign demand has been accompanied by a corresponding glut of the home market, a heavy fall of prices, and the ruin of a great number of merchants and agriculturists. It is estimated that there were, in April, 1828, no fewer than 600,000 tuns of wine in the Gironde, for which no outlet could be found; and the glut in the other departments is said to have been proportionally great. The fall in the price of wine has re-acted upon the vineyards, most of which have become quite unsaleable, and a total stop has been put to every sort of improvement. Nor have matters been the least amended during the current year; on the contrary, they seem to be gradually getting worse. Such is the poverty of the proprietors, that wine is now frequently seized and sold by the revenue officers in payment of arrears of taxes; and it appears, from some late statements in the *Mémorial Bordelais* (a newspaper published at Bordeaux), that the wine so sold, has not recently fetched more, at an average, than two thirds of the cost of its production!

Such are the effects that the restrictive system of policy has had on the wine trade of France—on a branch of industry which, we have already seen, employs *three millions* of people. It is satisfactory, however, to observe that the land-owners and merchants are fully aware of the source of the misery in which they have been involved. They know that they are not suffering from hostile or vindictive measures on the part of foreigners, but from the blind and senseless policy of their own government; that they are victims of an attempt to counteract the most obvious principles—to make France produce articles directly at home, which she might obtain from the foreigner in exchange for wine, brandy, &c., at a third or a fourth part of the expense they now cost. *They cannot export, because they are not allowed to import.* Hence, they do not ask for bounties and prohibitions; on the contrary, they disclaim all such quack nostrums, and demand what can alone be useful to them—a free commercial system.

'Considéré en lui-même,' say the land-owners and merchants of the Gironde, 'le système prohibitif est *la plus déplorable des erreurs*. La nature dans sa variété infinie, a départi à chaque contrée ses attributs particuliers; elle a imprimé sur chaque sol sa véritable destination, et c'est par la diversité des produits et des besoins qu'elle a voulu unir les hommes par un lien universel et opérer entre eux ces rapprochemens qui ont produit le commerce et la civilisation.

'Quelle est la base du système prohibitif? Une véritable chimère, qui consiste à essayer de vendre à l'étranger sans acheter de lui.

'Quelle est donc la conséquence la plus immédiate du système prohibitif, ou, en d'autres termes, du monopole? C'est que le pays qui est placé sous son empire ne peut vendre ses produits à l'étranger.

Le voilà donc refoulé dans lui-même; et à l'impossibilité de vendre ce qu'il à de trop vient se joindre la nécessité de payer plus cher ce qui lui manque.

'Notre industrie ne demandoit, pour fructifier, ni la faveur d'un monopole, ni cette foule d'artifices et de secours dont bien d'autres ont imposé le fardeau au pays. Une sage liberté commerciale, une économie politique fondée sur la nature, en rapport avec sa civilisation, en harmonie avec tous les intérêts véritables; telle étoit son seul besoin. Livrée à son essor naturel, elle se seroit étendue d'elle-même sur la France de 1814, comme sur celle de 1789; elle auroit formé la plus riche branche de son agriculture; elle auroit fait circuler et dans son sol natal, et dans tout le sol du royaume, une sève de vie et de richesse; elle auroit encore attiré sur nos plages le commerce du monde; et la France, au lieu de s'ériger avec effort en pays manufacturier, auroit reconquis par la force des choses une supériorité incontestable comme pays agricole.

'Le systême contraire a prévalu.

'La ruine d'un des plus importans départemens de la France; la détresse des départemens circonvoisins; le dépérissement général du midi; une immense population attaquée dans ses moyens d'existence; une capital énorme compromis; la perspective de ne pouvoir prélever l'impot sur notre sol appauvri et depouillé; une préjudice immense pour tous les départements dont nous sommes tributaires; une décroissement rapide dans celles de nos consommations qui profitent au Nord; la stagnation générale du commerce, avec tous les désastres qu'elle entraîne, toutes les pertes qu'elle produit, et tous les domages ou matériels, ou politiques, ou moraux qui en sont l'inévitable suite; enfin l'anéantissement de plus en plus irréparable de tous nos anciens rapports commerciaux; les autres s'enrichissant de nos pertes et développant leur systême commerciale sur les debris du notre;

'Tels sont les fruits amers du systême dont nous avous été les principales victimes.'

Such is the well-authenticated account laid before the Chamber of Deputies, by 12,563 land-owners and merchants of Gironde, of the *practical* operation and real effect of that very system of policy which, extraordinary as it may seem, has been held up for imitation to the Parliament of England!

The effect of this system upon the silk trade of France, the most important branch of her *manufacturing* industry, and one in which she had long the superiority, is similar, and hardly less destructive. Her prohibitions have forced others to manufacture for themselves, so that the foreign demand for silks is rapidly diminishing.[1] It is stated, in *Observations Adressées à la Commission d'Enquête*, by the delegate of the Chamber of Commerce of Lyons, that the silk manufacture is in the worst possible state. 'Ce qui doit surtout exciter,' he observes 'la solicitude du gouvernment et le décider à entrer dans nos vues, c'est *l'état déplorable, alarmant de la fabrique de Lyon:* les quatre anneés de 1824 à 1827, offrent, sur les quatres années précédentes un déficit qui excéde 150 mille kilog.: pour les seules expéditions d'Allemagne l'année 1828 et l'année courante 1829 nous donnent une progression décroissante plus effrayante encore.'—(p. 11.) It is further stated, in a report by the manufacturers of Lyons, that there were 26,000 looms employed in that city in 1824, while at present (1830) there are not more than 15,000. The competition of Switzerland and England has been chiefly instrumental in producing these effects. At Zurich, where there were only 3,000 looms employed in 1815, there were last year more than 5,000; and at Eberfeld, where there were none in 1815, there are now above 1,100. Switzerland is said to have in all, upwards of 10,000 looms employed at this moment in the manufacture of plain broad silks.

Besides the injury done to the wine trade of France by her anti-commercial system, it has been much injured by the *octrois*, and other duties laid on wine when used for home consumption. These, however, have been modified since the accession of Louis Philippe; and it is reasonable to suppose, that the facts now disclosed, as to the ruinous operation of this system, the example of the more liberal policy that has been recently shewn by England, in the repeal of the odious discriminating duties on French wines, and the more general diffusion of correct ideas with respect to the real sources of wealth, will, at no distant period, cause the adoption of such changes in the commercial legislation of France, as may render it more conducive to her interest, and more in accordance with the spirit of the age. If we were hostile to France, we should wish her to continue the present system; but we disclaim being actuated by any such feelings. We are truly anxious for her prosperity, for her sake and our own; for every thing that contributes to her prosperity, must, in some degree, redound to the advantage of her neighbours. Whatever France, or any country, may hope to gain by commerce, must be combined with, and in proportion to, the beneficial effects that flow from it to those who, by their wants or superfluities, their productions, natural or artificial, have either to give or to receive from her. The advantages of commerce cannot be monopolized; and those who cultivate it with the greatest success, are the greatest benefactors of mankind.

The operation of the prohibitive system in America has been similar. Notwithstanding the unprecedented progress of the United States in wealth and population, their foreign trade has been nearly stationary for the last ten years! And yet, considering the spirit of commercial enterprize by which the people, particularly in the New England States and New York, are animated, and their skill in navigation, it might have been fairly presumed that the growth of their foreign trade would at least have kept pace with the development of the internal resources of the country. That it has not done so, is wholly owing to the policy of Government. Not satisfied with the extraordinary advances their constituents had made in numbers and wealth, congress seems to have believed that their career might be accelerated by means of custom-house regulations!—by giving an artificial direction to a portion of the public capital and industry, and turning it into channels into which it would not naturally flow.

No one who has the slightest acquaintance with the condition of America,—who knows that she is possessed of boundless tracts of fertile and unappropriated land,—that her population is comparatively thin, and wages high,—can doubt that agriculture *must*, for a long series of years, be the most profitable species of employment in which her citizens can engage. There can be no question, indeed, that such branches of manufacture as are naturally adapted to her peculiar situation, will gradually grow up and flourish in America, without any artificial encouragement, according as her population becomes denser, and the advantage which now exists on the side of agriculture becomes less decided. But to force, by means of duties and prohibitions, the premature growth of manufactures, is plainly to force a portion of the industry and capital of the country into businesses in which it will be *least* productive.

Such, however, has been the policy of the American legislature. The exploded sophisms of the mercantile system, though renounced by every statesman in Europe, have acquired a noxious influence in congress, and been put forth with as much confidence as if their soundness neither had been, nor could be questioned. From 1816 downwards, the object of the American legislature has been to bolster up a manufacturing interest, by imposing oppressive duties on most manufactured articles imported from abroad. Now, it is obvious, even were the articles produced in America through the agency of this plan as cheap as those they have superseded, that nothing would be gained by it; for to whatever extent the importation of foreign articles may be diminished, there must be a corresponding diminution in the exportation of native American products; so that the only result would be the raising up of one species of industry at the expense of another species, entitled to an equality of protection. But the 'American system' has not been so innocuous. Instead of the goods manufactured in the States being as cheap as similar ones manufactured in Europe, they are admitted to be, at an average, from 30 to 100 per cent. dearer! The extent of the pecuniary sacrifice that is thus imposed on the Union, has been variously estimated by American writers; but we have been assured, by those who have the best means of knowing, that it may be moderately estimated at from 50,000,000 to 60,000,000 dollars, or from about 11,000.000*l.* to 13,000,000*l.*! And this immense burden,—a burden nearly *three* times as great as the whole public expenditure of the republic, is incurred for no purpose of public utility, and is productive of nothing but mischief. The whole effect of the scheme is to divert a certain amount of the national capital from the production of cotton, wheat, rice, tobacco, &c. (the equivalents sent to foreigners in payment of manufactured goods), to the direct production of these goods themselves! And as the latter species of industry is nowise suitable for America, a tax of 13,000,000*l.* is imposed on the Union, that the manufacturers may continue a losing business. We shall not undertake to decide whether the absurdity of this system, or its costliness, be its most prominent feature.

But the pecuniary sacrifice arising out of a policy of this sort, is really the least part of the injury it occasions. Besides forcing a large portion of the national capital and industry into comparatively barren channels, it has raised up so many conflicting pretensions, and led to such a disunion of interests, as threatens to be, in no common degree, injurious to the public tranquillity, and may even seriously endanger the stability of the Union. That its influence has not been more injurious, is solely owing to the smuggling it has occasioned. With a frontier like that of America, and a half or more of the population hostile to the tariff, it would be worse than absurd to suppose that it could be carried into full effect. But it has enough of influence to render it in the last degree prejudicial —to occasion a great rise in the price of many important articles—to cripple the trade and navigation of the country— and to throw a considerable part of it into the hands of foreigners and outlaws, who carry it on in defiance of the law.

We entertain too favourable an opinion of the Americans, to suppose that such a system can be permanent. It has been established in opposition to the wishes of all but a majority of Congress, is exceedingly unpopular in the southern States, and generally throughout the Union, and has been repeatedly condemned by committees of the legislature. In an able report by a committee of the House of Representatives, dated 8th of February, 1830, it is said,—'We had before us the prospect of a long and general peace, and our policy should have been regulated accordingly. Our revenue laws should have been restored gradually, but decisively, to their condition previously to the war. Our policy unfortunately took another direction. The tariff of 1816 laid the foundation of all our subsequent errors, and we have now been engaged for fifteen years in an unprofitable experiment, to effect what embargo, non-importation, non-intercourse, and war, failed to accomplish. We have attempted, by the mere force of congressional decrees, to resist the natural and salutary tendency of our industry to commercial and agricultural pursuits. We have been steadily sacrificing the commerce, navigation, and capital of New England, merely to bring forward new competitors in manufacturing, to embarrass our old and skilful artisans, and to ruin ourselves. We have, from session to session, kept trade in such agitation and uncertainty, that the value of property could never be ascertained till the adjournment of Congress, and this we have called encouraging and protecting our industry! We have wasted millions of our ancient profits of commerce in a visionary experiment to increase our national wealth. In a legislative attempt to make ourselves more completely independent of other nations, we have effectually undermined the foundation of that naval power which can alone protect our country from foreign aggression.'

There is no exaggeration in this statement, and we shall not do the Americans the injustice of supposing that they will blindly continue to uphold a system of policy founded on the most erroneous principles, and productive only of such pernicious results. The concluding paragraph in the Report now referred to, deserves to be quoted:—

'The wise and benevolent plans of Mr. Pitt and Mr. Jefferson, in Europe and America, were frustrated by the wars which succeeded the French Revolution, and put an end to all commercial reform. The restrictions of war naturally superseded the friendly reciprocity of peace. But now that peace is restored among nations, your Committee propose to renew, in a form modified to suit the present state of our investments and laws, the same liberal commercial policy which was recommended by such illustrious authority before the European wars. The honour of effecting this revolution in the commerce of the world is peculiarly the office of a country enjoying, in all other respects, the largest share of civil and religious freedom. It will be a proud honour for our Republic to enlarge the intercourse and diffuse its liberal principles among nations; to moderate stubborn jealousies by hospitable associations, to increase the comforts and double the resources of knowledge; and to spread the light of knowledge and civilization in every quarter of the globe. We are bound by every consideration at least to make the experiment. The liberal character of our institutions, the federal form of our government, the immeasurable extent of our country, the vast surplus and variety of its productions, the imperative necessity of renovating our navigation, and of enlarging our commercial marine, the preservation of the harmony of our union, the improvement of the condition of mankind, nay, every consideration, pleads in favour of a policy so essential to perfect that plan of liberal government which is the proud ornament and substantial blessing of the present age of the world.'

III.—*Operation and Influence of Restrictions originating in Political Motives.*—Restrictions on the commercial intercourse between different nations have not always originated in mistaken notions with respect to the precious metals, nor in a desire to advance the interests of the home producer. A considerable number owe their existence to more patriotic, though, as they seem to us, equally mistaken views—to the wish to render ourselves independent of foreign supplies, to avenge the prohibitions of foreign states by retaliatory proceedings, and to provide for our security by encouraging such businesses as may contribute to the national defence, though they should be less profitable than others.

(1.) There is something very seductive in the idea of independence; and it is not surprising that a system of policy which promises to place a country in this enviable situation, should have many votaries. But independence rests on far other foundations than the miserable machinery of custom-house regulations. We should not call an individual who had his shoes, coats, hats, &c., manufactured in his own house, more independent than an individual possessed of equal fortune who bought them of the shoemaker, the tailor, the hatter, &c. Independence does not depend exclusively on the power of being able directly to supply our own wants by the produce of our own labour; but it depends indifferently either on the power to do this, or on the power to furnish an equivalent for the various necessaries and conveniencies we may wish to obtain; and it is admitted on all hands that those who apply themselves to a particular calling or occupation, will enjoy a greater command over the necessaries and conveniencies of life, through the intervention of an exchange with others, or, in other words, will be more independent than if they directly produced all the articles for which they have a demand. The same is the case with nations. We import cotton from America, timber from the north of Europe, and claret from France; but the fact of our doing this shows that we send commodities to those countries on which they set a higher value. We are not, therefore, in any respect more dependent on them than they are on us; and if we understand by independence the power to supply our wants without being under an obligation to any other people, we are completely independent. The commercial intercourse we carry on with foreigners, like that which we carry on with each other, is bottomed on the principle of mutual convenience: we give and receive equivalents; we supply reciprocal wants, and confer reciprocal benefits.

To wish to be wholly unconnected with foreigners, and at the same time to continue as rich and prosperous as ever, is to wish what is contradictory and absurd. It is equivalent to wishing that we had the soil and climate of China to produce tea, those of France to produce wine, and those of America to produce cotton. These, and thousands of equally useful and desirable products, can only be obtained through an exchange with the foreigner. We may no doubt become independent even of this exchange; but if we do, we must submit to be independent of that wealth and power to which commerce has raised us. The individual who prefers swimming across the river, is, of course, independent of the bridges, in the same way that the nation who should prefer poverty and barbarism to wealth and refinement would be independent of foreign commerce. But this is the independence of the savage. To be truly independent, in the enlarged, and, if we may so speak, civic sense of the term, that is to have the greatest possible command of the necessaries and conveniencies of life, a nation must avail itself of the productive energies of every other people, and deal with all the world on fair and liberal principles.

Nations, like individuals, are very apt to be influenced by feelings of animosity. Having experienced the injury arising from the prohibitory enactment of some foreign power, we naturally endeavour, in the irritation of the moment, to retaliate by a similar prohibition directed against some branch of its commerce. We seldom take time to reflect upon the probable influence of this prohibition upon ourselves; but enact it in the belief that, however it may affect us, it will, at any rate, inflict a much more serious injury on those against whom it is directed.

The history of commerce is full of instances of this sort. By the famous French Tariff of 1664, very high duties were imposed on a great number of foreign manufactured articles. The Dutch, whose commerce was seriously affected by these duties, endeavoured to prevail on M. Colbert, then minister of France, to reduce them in their favour; and, on his refusal, they prohibited the introduction of the wines, brandies, and manufactures of France into the territories of the republic. The war of 1672 was mainly occasioned by this dispute; and after six years of hostilities, and the expenditure of vast quantities of blood and treasure, the French consented to moderate their tariff in favour of the Dutch, and the Dutch took off their prohibition. In 1699 the English government prohibited the importation of bone-lace manufactured in Flanders, and the government of that country instantly retaliated by prohibiting the importation of English woollens. In a few years afterwards, both parties found it to be for their advantage to replace the trade on its former footing. The commerce between this country and France has been completely sacrificed to this jealous and vindictive spirit. Louis XIV. having espoused the cause of the exiled family of Stuart, the British government, in the irritation of the moment, and without reflecting that the blow aimed at the French would infallibly recoil upon themselves, imposed, in 1693, a discriminating duty of 8*l.* a tun on French wine, and in 1697 increased it to 33*l.* Unhappily the provisions in the Methuen treaty gave permanence to this impolitic system, which the French were not slow to retaliate. Custom-house regulations were used by both parties as a species of warlike engines: a prohibition on the one side was instantly met by a counter prohibition on the other, until the commerce between the two countries—a commerce which, had it not been violently interfered with, would have afforded a profitable field for the employment of millions upon millions of capital, and thousands upon thousands of individuals—has been almost wholly suppressed. In other quarters, too, the effects of this vindictive spirit have been, and are exceedingly powerful; and the high duties laid on many articles of British manufacture by the late American and Russian Tariffs are avowedly intended to serve as a retaliation for the high duties we have imposed on corn, timber, tallow, and other articles, the product of America and Russia.

At the same time, however, it must be admitted that a retaliatory prohibition may not always be inexpedient. If there be apparently good grounds for thinking that a prohibition will so distress those against whom it is levelled, as to induce them to withdraw or materially modify the prohibition or high duty, it is intended to avenge, it may be good policy to enact it. The recovery of an extensive foreign trade, or the permanent relief of commerce from a vexatious restraint, might more than balance the additional inconvenience to which every nation must in the mean time infallibly expose itself, when it enacts one prohibition or restriction in retaliation of another. But unless there be reasonable grounds for concluding that, by retaliating, the repeal or modification of the original prohibition will be procured, it would be most impolitic to embark in any such hostile course. If the prohibition acted only upon others, it would be different; but as the benefits of commerce are reciprocal,—as we neither sell nor buy, except to promote our own interest, when we prohibit this intercourse we necessarily injure ourselves, probably too to a much greater extent than we injure others. It is clear, therefore, that to enact or maintain a prohibition when there is no prospect of its occasioning the repeal or modification of that enacted by the foreigner, is a proceeding directly at variance with every sound principle. A regard to his own advantage will always dictate to every dispassionate individual the policy of purchasing his goods in the cheapest and best market, and why should the conduct of states be different? The French government has been unwise enough to prevent the introduction of English cottons and hardware into France, and has, consequently, forced its subjects to misemploy a large amount of capital, and to purchase inferior articles at a higher price than they would have obtained them for had they been allowed to buy them from us. But surely it is unnecessary to say that this is a line of conduct that ought to be *carefully avoided*, not followed. A foreign government does an injury to its subjects by making them pay an artificially enhanced price for their cottons and hardware; but is that any reason for the government of England doing the same?—for its compelling us to pay an artificially enhanced price for corn, wine, and brandy? To act in this way is not really to retaliate on the French, but on ourselves! It is erecting the blind and ferocious impulses of revenge into maxims of state policy. Our business is not to inquire where our neighbours buy the produce they consume, but to buy that for which we have a demand wherever it can be obtained for the lowest price. Foreigners will hardly refuse to *sell*, and as there can be no selling without an *equal buying*—no *exportation* without an equal *importation*,—by acting on a liberal system ourselves, we shall not only reap a very great immediate advantage, but shall most probably lead others to abandon their restrictions.

The late equalization of the duties on French and other wines may, we hope, be looked upon as the commencement of a new era in the commerce between this country and France. Every one who contrasts the two kingdoms—who compares their peculiar products and capacities of production—must be satisfied that nothing but the removal of oppressive duties and restrictions is necessary to the growth of the most extensive and mutually beneficial intercourse between them. We, therefore, most sincerely rejoice in the prospect that is now afforded of an end being put to that miserable system, which has so long deprived two great nations of the inestimable advantages each might derive from dealing with the other on a liberal footing. The British government, we feel assured, will not rest satisfied with what it has done to bring about so desirable a result; but will follow up the abolition of the discriminating duty on French wine, by the effectual reduction of the exorbitant duties on brandy, fruits, verdigris, linen, and other articles of French produce. A regard to our own interest requires that we should do this. This, fortunately, is a case in which we may gain, while it is not possible we can lose anything by doing what is right. If the French will not deal with us, that is, if they will not admit our hardware, cottons, and other products into their markets, the loss will be theirs, not ours; they will render it impossible for us to buy from them, and they will be guilty of the extraordinary folly of *voluntarily* excluding themselves from the markets of the richest country in the world! But we anticipate no such result. It would be a libel on the people and government of France to suppose that they should not perceive the absurdity of such conduct, or that they should be insensible to the advantages to be derived from meeting the liberal conduct of this government in a corresponding spirit. Hitherto they have met with nothing but disappointment and bankruptcy from their efforts to give effect to the prohibitive system; and such is the only harvest it will ever yield either to them or any other people. They have now the opportunity of escaping from it with *honour* as well as advantage.—Surely they will not throw it away.

With respect to restrictions imposed for the sake of national security, or the annoyance of some hostile power, we may observe, speaking generally, that their influence has been very much exaggerated. If a single nation had the absolute monopoly of any article that was necessary either to its own defence, or to the defence or well-being of others, it might, by prohibiting the exportation of such article, provide at once for its own security, and at the same time inflict a serious injury on its enemies. But it is doubtful whether there be any such commodity in existence. We, for example, are not masters of a single product, the prohibition of the exportation of which would not be far more injurious to ourselves than to any one else. And of all the commodities that we import, there is not one, with perhaps the single exception of tea, which, supposing its exportation were restricted by any foreign power in one quarter of the globe, we might not obtain from some other power, either in the same or some other quarter. The prohibition of the export of tea by the Chinese might oblige us to import a larger quantity of coffee; the prohibition of the export of cotton by the North Americans would make us increase our imports of the same article from Brazil, the Levant, and the East Indies; and the prohibition of the export of corn from one country, supposing we might freely import that article, would merely occasion an increased importation from other places. The commercial commonwealth is now of too vast an extent, and the political views and biases of its rulers too various and discordant, to admit of any thing like concert or combination ever obtaining amongst them. If the usual channels of commercial intercourse be choked or obstructed on one side, it will force a passage for itself in some other quarter. The products of art and industry are too widely diffused to be materially affected by the monopoly or hostility of any single state. Though one country should not deal with us, there is no cause for alarm; some other will certainly be less scrupulous, and will be glad to have the opportunity of supplying us with whatever we want. Nothing, therefore, can be a greater error than to imagine that, in the present state of the world, the security of any particular country, or her means of defence or aggression, can be materially increased by prohibitory regulations. The nature of the warlike implements made use of, and of the contests carried on in modern times, have occasioned an expense that can be defrayed only by the outlay of vast sums. There is no longer any doubt of the proposition that money is the sinews of war. That the wealthiest nation is *cæteris paribus*, decidedly the most powerful. Those who possess wealth in sufficient quantities, will never want for 'man and steel, the soldier and his sword;' they have a talisman by which they may cover the land with armies and the ocean with fleets, and against whose powerful influence the purest patriotism and the most unflinching courage will with difficulty struggle. But when such is the case, when it is universally admitted that wealth is the main source of power and influence, and when it admits of demonstration, that a free and extended commerce is the most prolific source of wealth, what can be more contradictory than to attempt to increase the defence or security of a country by enacting measures that must necessarily restrict and fetter its commerce? The possession of wealth is the best security; and as the freedom of commerce is, of all others, the most efficacious means of increasing wealth, it follows that those who are exerting themselves to give every facility to commerce, are at the same time exerting themselves in the most effectual manner to add to the power and independence of the country; and it also follows that the apologists and defenders of restrictions and prohibitions are, though probably without knowing it, labouring to sap the foundations of our power, and to cast us down from our high place amongst the nations of the earth.

The navigation-laws have been more generally approved than any of the other regulations imposed for the sake of security. The object of these laws was not only to prohibit foreign vessels from engaging in the coasting trade, but to hinder all importations from foreign countries, except in British ships, or in the ships of the country or place whence the goods were exported. This provision was levelled against the Dutch, who had but little native produce to export; but who, by superior economy and skill, had notwithstanding succeeded in engrossing a large share of the carrying trade of Europe. 'When,' says Dr. Smith, 'the act of navigation was made, though England and Holland were not actually at war, the most violent animosity subsisted between the two nations. It had begun during the government of the long parliament, which first framed this act, and it broke out soon after in the Dutch wars, during that of the Protector and of Charles II. It is not impossible, therefore, that some of the regulations of this famous act may have proceeded from national animosity. They are as wise, however, as if they had all been dictated by the most deliberate wisdom. National animosity, at that particular time, aimed at the very same object which the most deliberate wisdom would have recommended, the diminution of the naval power of Holland, the only naval power which could endanger the security of England. The act of navigation *is not favourable to foreign commerce, or to the growth of that opulence which can arise from it.* The interest of a nation in its commercial relations to foreign nations is, like that of a merchant with regard to the different people with whom he deals, to buy as cheap and sell as dear as possible. But the act of navigation, by diminishing the number of sellers, must necessarily diminish that of buyers; and we are thus likely not only to buy foreign goods dearer, but to sell our own cheaper, than if there was a more perfect freedom of trade. As defence, however, is of much more importance than opulence, the act of navigation is, perhaps, the wisest of all the commercial regulations of England.'—(Vol. ii., p. 293.)

It may, however, be very fairly

doubted whether, in point of fact, the navigation-law had the effects here ascribed to it, of weakening the naval power of the Dutch, and increasing that of this kingdom. The Dutch were very powerful at sea for a long period after the passing of this act; and it seems natural to conclude that the decline of their maritime preponderance was owing rather to the gradual increase of commerce and navigation in other countries, and to the disasters and burdens occasioned by the ruinous contests the republic had to sustain with Cromwell, Charles II., and Louis XIV., than to the mere exclusion of their merchant vessels from the ports of England. It is not meant to say that this exclusion was altogether without effect. The efforts of the Dutch to procure a repeal of the English navigation-law, show that, in their apprehension, it operated injuriously on their commerce*. It is certain, however, that its influence in this respect has been greatly overrated in this country. *Excessive taxation*, and not our navigation-law, was the principal cause of the fall of profits, and the decline of manufactures, commerce, and navigation in Holland. 'Les guerres,' says the well-informed author of the *Commerce de la Hollande*, 'terminées par les traités de Nimègue, de Ryswick, d'Utrecht, et enfin la dernière par le traité d'Aix-la-Chapelle, ont successivement obligé la République de faire usage d'un grand crèdit, et de faire des emprunts énormes pour en soutenir les fraix. Les dettes ont surchargé l'état d'une somme immense d'intérêts qui ne pouvoient être payés que par *une augmentation excessive d'impôts* dont il a fallu faire porter la plus forte partie par les consommations dans un pays qui n'a qu'un territoire extrêmement bonné, et par conséquent par l'industrie. Il a donc fallu faire enchérir infiniment la main-dœuvre. Cette cherté de la main-d'œuvre a non seulement restreint presque toute sorte de fabrique et d'industrie à la consommation intérieure, mais elle a encore porté un coup bien sensible au commerce de fret, partie accessoire et la plus précieuse du commerce d'économie; car cette cherté a rendu la construction plus chère, et augmenté le prix de tous les ouvrages des ports et des magasins. Il n'étoit pas possible que l'augmentation de prix de la main-d'œuvre ne donnât, malgré tous les efforts de l'économie Hollandoise, un avantage sensible aux autres nations qui voudroient se livrer au commerce d'économie et à celui de fret.'—(Tome ii., p. 211.)

This extract, which might, were it necessary, be corroborated by others to the same effect from all the best Dutch authors, shows that the decline of the commerce and maritime power of Holland is not to be ascribed to our navigation-law, or the restrictive regulations of other powers, but to the abuse of the funding system, and the excess of taxation. Neither does it appear that the opinion of Dr. Smith and others, that the navigation-law contributed powerfully to augment the naval power of this country, rests on any better foundation. The taste of the nation for naval enterprise had been awakened; the navy had become exceedingly formidable, and Blake had achieved his victories before the enactment of this famous law. So far, indeed, is it from being certain that the navigation act had, in this respect, the effect commonly ascribed to it, that there are good grounds for thinking that its influence was really opposite, and that it operated rather to diminish than to increase our mercantile navy. It is stated in Roger Coke's *Treatise on Trade*, published in 1671, that this act, by lessening the resort of strangers to our ports, had an injurious effect on our commerce; and he further states, that we had lost, within two years of the passing of the act of 1650, the greater part of the Baltic and Greenland trades, (p. 48.) Sir Josiah Child, whose treatise was published in 1696, corroborates Coke's statement; for while he decidedly approves of the navigation-law, he admits that the English shipping employed in the Eastland and Baltic trades had decreased at least *two-thirds* since its enactment, and that the foreign shipping employed in these trades had proportionally increased.—(Child's *Treatise on Trade*, p. 89.—*Glasgow Edition.*)

Exclusively of these contemporary authorities, Sir Mathew Decker, an extensive and extremely well-informed merchant, condemns the whole principle of the navigation act, and contends that, instead of increasing our shipping and seamen, it had diminished them both; and that, by rendering the freight of ships higher than it would otherwise have been, it had entailed a heavy burden on the public, and been one of the main causes that had prevented our carrying on the fishery so successfully as the Dutch.—(*Essay on the Causes of the Decline of Foreign Trade*, p. 60, *edit.* 1756.)

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* In the Treaty of Breda, agreed upon in 1667, between the States-General and Charles II., the latter undertook to procure the repeal of the navigation-law; but the subject was never agitated in either House of Parliament.

It would, perhaps, be going too far to say that we owe the American war to the navigation-laws: but we believe the attempts to enforce their provisions upon the colonists, contributed quite as much as the attempts to subject them to taxation, to accelerate that contest. There is a paragraph on this subject in one of Mr. Huskisson's speeches, which merits the attention of those who would form a fair estimate of the real influence of the navigation-laws:—

'If the proceedings of the government of this country, after the peace of 1763, be closely examined, we shall find that many of the causes which, ten years afterwards, led to the unfortunate rupture with our then colonies, now the United States of America, may be traced to our unreasonable attempts to enforce, in their most rigid and exclusive application, our colonial and navigation system. Every complaint, every petition, every remonstrance, against the oppressive tendency and vexatious consequences of that system, on part of the inhabitants of New England,—every temperate effort made by them to obtain some slight relaxation of the trammels that shackled their disposition to engage in commercial enterprize, were only met, on the part of the British Government, by a constant succession of new laws, enforcing still more restrictive regulations, framed in a spirit of still more vexatious interference. One instance of the character of that legislation will be sufficient; and I give it as a slight specimen of the commercial jealousy which prevailed in our councils in reference both to the colonies and to Ireland.

'A ship from our American possessions, laden with their produce, was stranded on the coast of Ireland. It will naturally be supposed, that the cargo was landed, and the ship repaired, in that country. No such thing. The law compelled the owners to send another English ship from England, for the purpose of bringing away the cargo,—a cargo which, not improbably, might then be wanted in the Irish market, and which was, perhaps, destined to be ultimately consumed there, after having been transshipped in a port of that country, landed in an English port, and again reshipped to Ireland.

'This is a sample of the real grievances under which our American colonies laboured. Such a state of law could not fail to engender great dissatisfaction and much heartburning. It is generally believed, that the attempt to tax our American colonies, without their consent, was the sole cause of their separation from the mother-country. But if the whole history of the period between the year 1763, and the year 1773, be attentively examined, it will, I think, be abundantly evident, that, however the attempt at taxation may have contributed somewhat to hasten the explosion, the train had been long laid, in the severe and exasperating efforts of this country to enforce, with inopportune and increasing rigour, the strictest and most annoying regulations of our colonial and navigation code. Every petty adventure in which the colonists embarked, was viewed by the merchants of this country, and the Board of Trade of that day, as an encroachment on the commercial monopoly of Great Britain. The professional subtlety of lawyers, and the practical ingenuity of custom-house officers, were constantly at work in ministering to the jealous but mistaken views of our sea-ports. Blind to the consequences elsewhere, they persevered in their attempts to put down the spirit of commercial enterprise in the people of New England, until these attempts roused a very different spirit,—that spirit which ventured to look for political independence from the issue of a successful rebellion.

'The result is well known. The country found itself engaged in a civil war. That war, in its progress, involved us in the greatest difficulty and embarrassment. It was terminated by submitting to humiliations such as, I trust to God, the Crown of Great Britain will never again be exposed to.'—(*Speeches*, Vol. III. p. 8.)

These statements cannot be questioned; and they are, at all events, sufficient to show that the assertions of those who contend that the navigation-laws had a prodigious effect in increasing the number of our ships and sailors, and in augmenting the power of the country, must be received with considerable distrust. But suppose that all that has been said by the apologists of these laws were true to the letter;—suppose it were conceded that, when first framed, the act of navigation was politic and proper, that would afford but a very slender presumption in favour of the policy of supporting it in the present day. Human institutions are not made for immortality. They must be accommodated to the varying circumstances and exigences of society. But the situation of Great Britain, and most other countries, has totally changed since 1650. The envied wealth and commercial greatness of Holland have passed away. We have no longer anything to fear from her hostility; and 'he must be indeed strangely influenced by antiquated prejudices and bygone apprehensions, who can entertain any of that jealousy from which the severity of this law originated.' London has become what Amsterdam formerly was, the grand emporium of the commercial world—*universi orbis terrarum emporium:* and the real question which now presents itself for consideration is, not what are the best means by which we may rise to naval greatness, but what are the best means of preserving that undisputed pre-eminence in maritime affairs to which we have attained?

Now it does not really seem that there can be much difficulty in deciding this question. Navigation and naval power are the children, not the parents—the effect, not the cause—of commerce. If the latter be increased, the increase of the former will follow as a matter of course. More ships and more sailors become necessary, according as the commerce between different and distant countries is extended. A country situated like Great Britain in the reign of Charles II., when her shipping was comparatively limited, might perhaps be warranted in endeavouring to increase its amount, by excluding foreign ships from her harbours. But it is almost superfluous to add, that it is not by such regulations, but solely by the aid of a flourishing and widely-extended commerce, that the immense mercantile navy we have now accumulated can be supported.

But it is extremely easy to show that to have continued to enforce the provisions of the old navigation-law in the present state of the world, would have been amongst the most efficient means that could have been devised for the destruction of our commerce. The wealth and power to which Great Britain has attained, has inspired other nations with those feelings of envy, jealousy, and hatred that the wealth of Holland formerly generated in our minds. Instead of ascribing our commercial and manufacturing superiority to its true causes—to the comparative liberality of our institutions, the absence of all oppressive feudal privileges, the security of property, the fairness of our system of taxation, and the freedom of internal industry, our foreign rivals contend that it has been entirely owing to our exclusive system; and appeal to our example to stimulate their respective governments to adopt retaliatory measures, and to protect them against British competition. These representations have already had the most injurious operation. Nor can there be a doubt that, had we continued to maintain our illiberal and exclusive system, and refused to set a better example to others, we should have run a very great risk of falling a victim to the vindictive spirit which such short-sighted and selfish policy would have generated.

Besides the regulations already alluded to, it had been a part of our policy to encourage the employment of our shipping by imposing higher duties on commodities imported into our harbours in foreign vessels, and to burden the latter with higher port and lighthouse duties. This practice was always loudly complained of by foreigners; but we had little difficulty in maintaining it, so long as the state of our trade enabled us to disregard the retaliatory measures of other powers. But the extraordinary increase that has taken place, since the commencement of the late war, in our manufactures for foreign consumption, and the necessity under which we have in consequence been placed, of conciliating our customers abroad, have led to the adoption of what has been called the *reciprocity system.* This system was first introduced into the trade with the United States. After the North Americans had succeeded in establishing their independence, they set about framing a code of navigation laws on the model of those of this country. Among other regulations of a restrictive character, it was enacted, that all foreign vessels trading to the United States should pay half a dollar, which was afterwards raised to a dollar, per ton duty, beyond what was paid by American ships; and further, that goods imported in foreign bottoms should pay a duty of 10 per cent. over and above what was paid on the same description of goods imported in American bottoms.

This law was avowedly directed against the navigation of Great Britain, though, as it was founded on the same principles as our navigation-laws, from which the States had formerly suffered so much, we could not openly complain of its operation. Under these circumstances, it would have been sound policy to have at once proposed an accommodation; and instead of attempting to meet retaliation by retaliation, to have offered to modify our navigation-law, in so far as American shipping was concerned, on the Americans making reciprocal modifications in our favour:—a different course was, however, followed. Various devices were resorted to for counteracting the navigation system of the Americans, without in any degree relaxing our own; but they all failed of their object; and at length it became obvious that we had engaged in an unequal struggle, and that the real effect of our policy was to give a bounty on the importation of the goods of other countries into the United States, to the exclusion of our own goods and ships. In consequence, a conviction of the necessity of making concessions began to gain ground; and it was ultimately fixed, by the commercial treaty negotiated with the United States in 1815, that *equal charges* should be imposed on ships of either country in the ports of the other, and that *equal duties* should be paid upon all articles, the produce of the one country, imported into the other, whether such importation was effected in British or American ships.

The principle of reciprocity having been conceded in the case of the United States, whose commercial marine is second only to that of Great Britain, it was not possible to avoid acting on the same principle, in the case of such European countries as might choose to admit our ships into their ports on a footing of equality. By the fourth section of the Act 6th Geo. 4. cap. iii. it is enacted, that his Majesty may, by an order in council, admit the ships of foreign states into our ports, on payment of the like duties that are charged on British vessels, provided that British vessels are admitted into the ports of such foreign states, on payment of the like duties that are charged on their vessels. The first demand of this sort was made, on the part of the Prussian government, which issued an order in council on the 20th of June, 1822, making large additions to the port-dues charged on all ships belonging to those nations which did not admit Prussian ships on a footing of reciprocity. The real object of this order was to injure the navigation of this country; and it was speedily found that it had the desired effect, and that its operation on British shipping was most pernicious.

Under these circumstances, the British merchants and ship-owners immediately applied to our government for relief. 'We were assailed,' says Mr. Huskisson, 'with representations from all quarters connected with the shipping and trade of the country, against the heavy charges imposed upon British ships in the ports of Prussia. In such circumstances, what course did his Majesty's government take? I had a conference with the Prussian minister at this court, and I well recollect the substance of his reply to me: "You have," he said, "set us the example by your port and light charges, and your discriminating duties on Prussian ships, and we have not gone beyond the limits of your example. Hitherto we have confined the increase of our port and tonnage charges to ships only; *but it is the intention of my government next year,* (and of this he showed me the written proof,) *to imitate you still more closely, by imposing discriminating duties on the goods imported in your ships.* Our object is a just protection to our own navigation; and so long as the measure of our protection does not exceed that which is afforded in your ports to British ships, we cannot see with what reason you can complain."

'Against such a reply, what remonstrance could we, in fairness, make to the Prussian government? We might have addressed ourselves, it may be said by some, to the friendly feelings of that government;—we might have pleaded long usage in support of our discriminating duties;—we might have urged the advantages which Prussia derived from her trade with England. Appeals like these were not forgotten in the discussion; but they were of little avail against the fact, that "the Prussian ship-owners were all going to ruin."

'By others, it may be said, your duty was to retaliate, by increasing your own port charges and discriminating duties, on Prussian shipping. I have already stated my reasons against the policy of this latter course. We were not prepared to begin a system of commercial hostility which, if followed up on both sides, could only tend to reciprocal prohibition. In this state of things, more prudently as I contend, we entered upon an amicable negotiation with the Prussian government upon the principle of our treaty with the United States,—that is, of abolishing on both sides, all discriminating duties on the ships and goods of the respective countries in the ports of the other.

'Having concluded an arrangement with Prussia upon this basis, we soon found it necessary to do the same with some of the other northern states. Similar conventions were accordingly entered into with Denmark and Sweden—reciprocity is the foundation of all those conventions; but it is only fair to add, that they contain other stipulations for giving facility to trade, and from which the commerce of this country, I am confident, will, in the result, derive considerable advantage.'—(*Speech, May 12th 1828, on the State of the Shipping Interest.*)

This statement shows conclusively that the establishment of the reciprocity system with Prussia, Sweden, &c., as to which so violent a clamour was raised, was not a measure of choice, but of necessity. We could not afford to hazard the exclusion of our manufactures from a country into which they are annually imported to the extent of *several millions.* So long as the Prussians, Swedes, Danes, &c., chose to submit to our system of discriminating duties, without retaliating, it was no business of ours to tell them that that system was illiberal and oppressive. But when they found this out without our telling them, and when they declared that unless we modified our restrictions, they would retaliate on our commerce, and either entirely exclude our commodities from their markets, or load those that were imported in British ships with prohibitory duties, should we have been justified in refusing to come to an accommodation? Were we to sacrifice the substance to the shadow? To turn away some of our best customers, because they chose to stipulate that the intercourse between them and us should be conducted either in their ships or in ours, as the merchants might think best? Our government had only a choice of difficulties; and they wisely preferred a system which has preserved free access for the English manufacturer to the markets of Prussia, and to the English ship-owners an equal chance with the Prussian, of being employed in the traffic between the two countries, to a system that would eventually, and at no distant period, have put an end to that mutually beneficial intercourse, which it had already subjected to serious difficulties.

It is said, indeed, by the shipowners and others opposed to the late alterations, that the Prussians and other northern nations build, man, and victual ships, cheaper than we can do; and that the ultimate effect of the reciprocity system will consequently be to give them a decided superiority in the trade. But admitting this statement to be true, still, for the reasons already given, it is pretty evident that the policy we have pursued was, under the circumstances of the case, the best. If we had not consented to the establishment of the reciprocity system, we must have submitted to be entirely excluded from the markets of the United States, Prussia, &c. In grasping at what was beyond our reach, we should thus have lost what we were already in possession of. We should not only have injured our shipowners by getting them forcibly excluded from the ports of many great commercial states, but we should have done an irreparable injury to our manufacturers,—a class which, without undervaluing the shipowners, is, in point of wealth and numbers, of at least twenty times more importance than they. Although, therefore, no doubt could be entertained with respect to the statements as to the comparative cheapness of foreign shipping, that would be no good objection to the measures recently adopted. But there are good grounds for thinking that these statements either are wholly without foundation, or are, at all events, very much exaggerated. In comparing the cost of British and foreign shipping, it is usual to estimate it by the tonnage, but this is a very false criterion; for while foreign ships are accurately measured, our ships are measured so that a vessel of 150 tons register generally carries 220 tons of a mixed cargo; and a vessel registered at 400 tons seldom carries less than 600 tons. In fact, such is the extreme inaccuracy of our mode of measuring, that we are informed by Sir John Hall, the very intelligent secretary of the St. Catherine's Dock Company, that he has known a ship put into dock for the purpose of being raised upon so as to increase her stowage, measure less after she had acquired the capacity of carrying 100 tons additional, than she did before going into dock! Sir John Hall further states, that in estimating the expense of English, Dutch, French, and most foreign ships together by the ton, we ought to deduct nearly a half from the first, in order to get the true comparative cost of each.—(*Hall, on the Warehousing System and Navigation Laws*, p. 31.)

There is in the Report already referred to, of the Committee of the House of Representatives of the United States, a detailed statement of the duties levied here and in America on the materials consumed in building and rigging a ship of 500 tons' burden, which shows that those charged in the United States exceed by 1665 dollars those charged in this country; and no one doubts that the wages of American are as high as those of British seamen.—(*Report, &c. Appen.*, p. 47, American ed.)

It is generally believed that ships built in the ports of the Baltic will not last the time, nor bear the wear and tear of British ships. It is certain, too, that Prussian ships are more heavily masted and rigged, and require larger crews than ours; and the rate of insurance here is much cheaper. The difference in the cost of provisions must be immaterial; for in all distant ports our ships procure provisions and stores of all sorts at the same rate as the foreigner. On the whole, therefore, it would appear that the alarm with respect to the supposed decay of our shipping is altogether imaginary. We believe that, generally speaking, British ships are sailed cheaper than those of any other nation; and while the late modifications in the navigation laws were imperiously required by a just regard to our manufacturing and commercial interests, there are no grounds whatever for believing that they will be injurious to our shipping.

If, however, there be any real ground for believing that ships in the north of Europe may be built cheaper than in England, the remedy is not to be sought for in a revival of the prohibitive system. Whatever advantage the Prussian and Danish shipowners at present enjoy as compared with ours, is not owing to their peculiar skill or sagacity, but to our unexampled folly: to our loading the superior timber of the north of Europe with a discriminating duty of 45*s.* a load, in order to force the consumption of the dearer and comparatively worthless timber of Canada! We speak advisedly, and from the best attainable information, when we express our conviction that a reduction of the duties on Baltic timber to the level of those charged on timber from Canada, would secure for us a new and important branch of industry,—the building of ships for exportation.

Restrictions on the Trade in Machinery.

1*st. Importation of Machinery.*—A considerable diversity of opinion exists as to the policy of imposing restrictions on the trade in tools and machines. Few, indeed, doubt the propriety of abolishing all restrictions on their importation. The possession of improved instruments of production is of the utmost importance. To exclude those that are most powerful, because they happen to be made abroad, is in effect to refuse to avail ourselves of the superior means of manufacturing enjoyed by foreigners! If the tools and machines constructed at home be superior to those made abroad, the prohibition of the latter is obviously useless; and if they be not superior, it is injurious. The emulation inspired by foreign competition is the most effectual means of securing excellence in all departments; and there is none in which it is of such vital importance as in the manufacture of machines. Inferiority in almost any other branch of industry is of comparatively little consequence, and may be accompanied with great excellence in many. But those who employ inferior machines can hardly fail of being below their neighbours in *all* departments; for there is hardly one that is not materially dependent on the nature of the instruments made use of by those engaged in it.

The justice of these principles seems now to be pretty generally acknowledged. And by way of encouraging the early introduction of new inventions and methods of production from foreign countries, it is usual to make them, for a longer or shorter period, the exclusive property of those by whom they are introduced. In England, the patents granted to the introducers of new inventions from foreign countries, are for fourteen years, being as long a period as they would be entitled to were they the original inventors. It is stated in defence of this rule, that the object in granting a patent is to encourage the bringing forth of new inventions and discoveries that may be useful to the public; and that whether the invention has been arrived at by study, or discovered by travel, is of no moment. But this is a very inaccurate representation. In the granting of rewards for any invention or discovery, respect must not be had to its utility merely, but also to the difficulties that have been overcome in making it. It will hardly, however, be contended, that there can, in the great majority of cases, be the same difficulty, or, consequently, the same merit in introducing a new machine, or a new method of performing any piece of work already in use in a foreign country, that there is in originating new discoveries. In point of fact, it may be doubted whether any exclusive privilege ought to be given to those who introduce foreign inventions. If they be of very considerable value, there can be little doubt that they will be introduced without any artificial encouragement: and admitting such to be the case, it certainly appears that the inconvenience resulting from the exclusion of the public from the use of a valuable discovery for a lengthened period, must very much overbalance any advantage that can fairly be supposed to result from its being introduced a few weeks, or perhaps days, earlier than it would otherwise be. One great motive for granting a patent to an original inventor, is to prevent the discovery from being lost, by inducing him to make it public; but in the case of the introducer of a foreign discovery, this motive can have no influence. The invention is no longer capable of being lost; it is already before the public, and may be copied and practised by every one beyond the limits of the privilege enjoyed by the inventor. Hence, whatever encouragement may be given to the importers of foreign inventions, it seems altogether inexpedient that it should be so great as that which is given to original inventors. If their patents were limited to three, or at most four years, they would probably be longer than they ought to be.

But any encouragement given to the introduction of new machines into Great Britain by the law of patents or otherwise, is far more than counterbalanced by the duties on timber. These are decinedly the most objectionable of any in our tariff. If, indeed, there be any one article more than another with which it is of primary importance that a commercial and manufacturing country like England should be abundantly supplied at the cheapest rate, that article is timber. It is indispensable to the construction of ships and houses, and of most descriptions of machinery. And yet this essential article is subjected to oppressive duties, and to still more oppressive preferences. No finance-minister, however rapacious and ignorant, ever ventured to impose heavy duties on ploughs, waggons, ships, &c., when ready for sale: but whether we tax an article when made, or tax the materials of which it is made, is exceedingly immaterial. The result is, in both cases, the same; or if there be any difference, it were better, perhaps, that the duty should be laid on the finished article. It would be no adequate apology for such a duty to say that it was imposed for the sake of revenue. It is absurd, indeed, to imagine, that revenue can be increased by taxing the instruments of production. But even this excuse, worthless as it is, cannot be alleged in extenuation of the existing duties on timber. They were imposed principally in the view of forcing the consumption of the inferior and dearer timber of Canada. And to accomplish this end—an end which has been shown to be injurious to Canada—a direct pecuniary loss of about 1,500,000*l.* a-year is entailed on Great Britain; our trade with the countries round the Baltic is impaired; and we are constrained to construct our ships, houses, and machines of materials that are at once high-priced and less durable!

2. *Exportation of Machinery.*—The question as to the policy of allowing the free exportation of machinery is not so easily solved as the question as to its importation. Nations are not only justified in availing themselves of every fair means of outstripping their neighbours in the career of improvement, but are bound to make use of them. If any single country happened to possess superior machinery, which it was in a condition to withhold from others, we should certainly think that its rulers displayed more of generosity than of good sense, were they to concede to others the free use of what might be made to redound so much to their peculiar advantage. Those who advocate the principles of free trade do so, not because there is any magic in the words, or because freedom abstractly considered is preferable to restraint, but because, upon examining the practical influence

and operation of the two systems, the absence of restrictions is found, in the vast majority of instances, to contribute to the public advantage. Hence in all cases the presumption is against those who defend restrictions; but, at the same time, we admit that this presumption is not conclusive, and that the policy to be pursued in any given case should depend upon the investigation of all the circumstances connected with it. In our view of the matter, the question which a legislature proposing to restrict the exportation of superior machinery has to consider is merely this,—Will the proposed restriction be effectual to prevent the foreigner from obtaining possession of the prohibited machines? If, upon a review of the whole circumstances of the case, this question may be satisfactorily answered in the affirmative, we should be the last to propose throwing the trade open. But it is hardly possible to suppose that a case should ever occur in which such a conclusion may be safely come to. Specifications of all our patents, and plans, and descriptions of every sort of machinery in use at Manchester, Glasgow, and Birmingham may be found in every considerable town on the Continent. Nor is this all: the laws against the emigration of artisans, having been found to be at once oppressive and impossible to execute, were repealed in 1825. Now, we would beg to ask, whether anything can be more preposterously absurd than to interdict the exportation of machines, and yet to allow the free egress of the workmen by whom they are made? This is not to deprive the foreigner of improved machines, but to make him manufacture them for himself: it is tempting our best artisans to emigrate, and depriving ourselves of an advantageous branch of business of which we might, in a great measure, enjoy a monopoly. The machine manufactures, carried on by English workmen, so common in France, Prussia, and other continental states, owe their existence to our legislation. Experience, therefore, shows that this case forms no exception to the common rule: and sound policy would seem to dictate that the restriction on exportation should be repealed, and such moderate duties imposed in its stead as might yield a revenue without materially checking exportation. A regulation of this sort would be far more advantageous to our manufacturers than the present system.

Conclusion of Observations on Restrictions—Petition of Merchants of London for a Free Trade.

It has sufficiently appeared from the previous review, that whether we consider restrictions on commerce with reference to their influence on the trade in the precious metals, or the progress of industry at home, or on national security and independence, they are alike objectionable. Their effects are in every instance such as ought to be deprecated. Their tendency is to diminish instead of increasing wealth, to retard instead of accelerating the progress of civilization, and to impair the means of defence and aggression.

Arguments similar to those previously made use of to demonstrate the mischievous influence of restrictions have been repeatedly advanced. The advantages of commercial freedom were set in a very striking point of view by Sir Dudley North, about one hundred and forty years since; and Sir Matthew Decker, Mr. Hume, and others, subsequently enforced the same principles, and showed the ruinous consequences of the prohibitive system. But its complete overthrow was reserved for Dr. Smith, who has examined and refuted the various arguments in favour of restrictions, in the most able and masterly manner, and with a fulness of illustration that leaves nothing to be desired. Such, however, were the prejudices to be overcome, and the obstacles opposed to the progress of more enlarged and liberal opinions, that notwithstanding Dr. Smith's work has been in circulation for about half a century, it is only within these very few years that statesmen and merchants have given a practical assent to its doctrines, and begun to act upon them. But happily a new era has at length begun—*novus sæclorum nascitur ordo!* The principles of free trade are no longer viewed as barren and unprofitable speculations, as the visions of theorists dreaming in their closets of public happiness never to be realised. Their justice has been admitted by the merchants, and they have been partially acted upon by the parliament of England. So that to the glory of being the first to promulgate this just and beneficent system, and to demonstrate its truth, we are now entitled to the higher praise of being the first to give it a practical bearing and real effect.

With a few distinguished exceptions

most mercantile men were, at no distant period, attached to the restrictive system. But such is no longer the case. In 1820 the merchants of London, and of most other great towns, showed how much they had emancipated themselves from the prejudices of their fathers, by petitioning the legislature to give effect to those liberal principles we have endeavoured to elucidate. The petition from the Metropolis was subscribed by all the principal traders, who did not hesitate to express their conviction, that the repeal of every protecting regulation would be for the public advantage. This document is, in every point of view, so important, and contains so admirable a summary of the doctrines we have attempted to unfold, that we should be inexcusable were we not to lay it before the reader:—

'To the Honourable the Commons, &c., &c., the Petition of the Merchants of the City of London,

'Showeth,

'That foreign commerce is eminently conducive to the wealth and prosperity of a country, by enabling it to import the commodities for which the soil, climate, capital, and industry of other countries are best calculated, and to export, in payment, those articles for which its own situation is better adapted.

'That freedom from restraint is calculated to give the utmost extension to foreign trade, and the best direction to the capital and industry of the country.

'That the maxim of buying in the cheapest market and selling in the dearest, which regulates every merchant in his individual dealings, is strictly applicable, as the best rule for the trade of the whole nation.

'That a policy founded on these principles would render the commerce of the world an interchange of mutual advantages, and diffuse an increase of wealth and enjoyments among the inhabitants of each state.

'That, unfortunately, a policy the very reverse of this has been and is, more or less, adopted and acted upon by the government of this and every other country; each trying to exclude the productions of other countries, with the specious and well-meant design of encouraging its own productions: thus inflicting on the bulk of its subjects, who are consumers, the necessity of submitting to privations in the quantity or quality of commodities; and thus rendering what ought to be the source of mutual benefit and of harmony among states, a constantly recurring occasion of jealousy and hostility.

'That the prevailing prejudices in favour of the protective or restrictive system may be traced to the erroneous supposition that every importation of foreign commodities occasions a diminution or discouragement of our own productions to the same extent: whereas it may be clearly shown, that although the particular description of production which could not stand against unrestrained foreign competition would be discouraged, yet as no importation could be continued for any length of time without a corresponding exportation, direct or indirect, there would be an encouragement for the purpose of that exportation of some other production to which our situation might be better suited; thus affording at least an equal, and probably a greater, and certainly a more beneficial, employment to our own capital and labour.

'That of the numerous protective and prohibitory duties of our commercial code, it may be proved that, while all operate as a very heavy tax on the community at large, very few are of any ultimate benefit to the classes in whose favour they were originally instituted, and none to the extent of the loss occasioned by them to other classes.

'That among the other evils of the restrictive or protective system, not the least is, that the artificial protection of one branch of industry, or source of production against foreign competition, is set up as a ground of claim by other branches for similar protection; so that if the reasoning upon which these restrictive or prohibitory regulations are founded were followed out consistently, it would not stop short of excluding us from all foreign commerce whatsoever. And the same train of argument, which, with corresponding prohibitions and protective duties, should exclude us from foreign trade, might be brought forward to justify the re-enactment of restrictions upon the interchange of productions, (unconnected with public revenue,) among the kingdoms composing the union, or among the counties of the same kingdom.

'That an investigation of the effects of the restrictive system, at this time, is peculiarly called for, as it may, in the opinion of your petitioners, lead to a strong presumption that the distress which now so generally prevails is considerably aggravated by that system; and that some relief may be obtained by the earliest practicable removal of such of the restraints as may be shown to be most injurious to the capital and industry of the community, and to be attended with no compensating benefit to the public revenue.

'That a declaration against the anti-commercial principles of our restrictive system is of the more importance at the present juncture, inasmuch as, in several instances of recent occurrence, the merchants and manufacturers of foreign countries have assailed their respective governments with applications for further protective or prohibitory duties and regulations, urging the example and authority of this country, against which they are almost exclusively directed, as a sanction for the policy of such measures. And certainly, if the reasoning upon which our restrictions have been defended is worth any thing, it will apply equally in behalf of the regulations of foreign states against us. They insist upon our superiority in capital and machinery, as we do upon their comparative exemption from taxation, and with equal foundation.

'That nothing would tend more to counteract the commercial hostility of foreign states, than the adoption of a more enlightened and a more conciliatory policy on the part of this country.

'That although, as a matter of mere diplomacy, it may sometimes answer to hold out the removal of particular prohibitions or high duties, as depending upon corresponding concessions by other states in our favour, it does not follow that we should maintain our restrictions in cases where the desired concessions on their part cannot be obtained. Our restrictions would not be the less prejudicial to our capital and industry, because other governments persisted in preserving impolitic regulations.

'That, upon the whole, the most liberal would prove to be the most politic course on such occasions.

'That, independent of the direct benefit to be derived by this country on every occasion of such concession or relaxation, a great incidental object would be gained, by the recognition of a sound principle or standard to which all subsequent arrangements might be referred; and by the salutary influence which a promulgation of such just views by the legislature, and by the nation at large, could not fail to have on the policy of other states.

'That, in thus declaring, as your petitioners do, their conviction of the *impolicy and injustice of the restrictive system*, and in desiring every practicable relaxation of it, they have in view only such parts of it as are not connected, or only subordinately so, with the public revenue. As long as the necessity for the present amount of revenue subsists, your petitioners cannot expect so important a branch as the Customs to be given up, nor to be materially diminished, unless some substitute less objectionable be suggested. But it is *against every restrictive regulation of trade, not essential to the revenue, against all duties merely protective from foreign competition, and against the excess of such duties as are partly for the purpose of revenue and partly for that of protection*, that the prayer of the present petition is respectfully submitted to the wisdom of parliament.

'May it, therefore, &c.'

CHAPTER V.

1. *Speculative Transactions.*—2. *Commercial Revulsions.*—3. *Abuse of Credit—Usury Laws.*—4. *Habits of Saving, &c.*

1. *Speculative Commercial Transactions.*—IT very rarely happens that either the actual supply of any species of produce in extensive demand, or the intensity of that demand, can be exactly measured. Every transaction in which an individual buys in order to sell again, is, in fact, a speculation. The buyer anticipates that the demand for the article he has purchased will be such at some future period, either more or less distant, as will enable him to dispose of it with profit; and the success of the speculation depends, it is evident, on the skill with which the circumstances that must determine the future price of the commodity have been estimated. It follows, therefore, that in all highly commercial countries where merchants are possessed of large capitals, and where they are left to be guided in the use of them by their own discretion and foresight, the price of commodities will be very much influenced, not merely by the actual occurrence of changes in the accustomed relation of the supply and

demand, but by the anticipation of such changes. It is the business of the merchant to acquaint himself with every circumstance affecting the particular description of commodities in which he deals. He endeavours to obtain, by means of an extensive correspondence, the earliest and most authentic information with respect to every thing that may affect their supply or demand, or the cost of their production; and if he learned that the supply of an article had failed, or that, owing to changes of fashion, or the opening of new channels of commerce, the demand for it had been increased, he would most likely be disposed to buy in the expectation of profiting by the rise of price, which, under the circumstances of the case, could hardly fail of taking place: or, if he were a holder of the article, he would refuse to part with it, unless for a higher price than he would previously have accepted. If the intelligence received by the merchant had been of a contrary description,—if, for example, he had learned that the article was now produced with greater facility, or that there was a falling off in the demand for it, caused by a change of fashion, or by the shutting up of some of the markets to which it had been previously admitted, —he would have acted differently: in this case he would have anticipated a fall of prices, and would either have declined purchasing the article except at a reduced rate, or have endeavoured to get rid of it, supposing him to be a holder, by offering it at a lower price. In consequence of these operations, the prices of commodities, in different places and periods, are brought comparatively near to equality. All abrupt transitions from scarcity to abundance are avoided; an excess in one case is made to balance a deficiency in another, and the supply is distributed with a degree of steadiness and regularity that could hardly have been deemed attainable.

It is obvious from what has now been stated, that those who indiscriminately condemn all sorts of speculative engagements have never reflected on the circumstances incident to the prosecution of every undertaking. In truth and reality, they are all speculations. Their undertakers must look forward to periods more or less distant, and their success depends entirely on the sagacity with which they have estimated the probability of certain events occurring, and the influence which they have ascribed to them. Speculation is, therefore, really only another name for foresight, and though fortunes have sometimes been made by a lucky hit, the character of a successful speculator is, in the vast majority of instances, due to him only who has skilfully devised the means of effecting the end he had in view, and has outstripped his competitors in the judgment with which he has looked into futurity, and appreciated the operation of causes producing distant effects. Even in those businesses, such as agriculture and manufactures, that are apparently the most secure, there is, and must be, a great deal of speculation. Those engaged in the former have to encounter the variations of seasons, while those engaged in the latter have to encounter the variations of fashion; and each is besides liable to be affected by legislative enactments, by discoveries in the arts, and by an endless variety of circumstances which it is always very difficult, and sometimes quite impossible, to foresee. On the whole, indeed, the gains of the undertakers are so adjusted that those who carry on different businesses obtain at an average the common and ordinary rate of profit. But the inequality in the gains of individuals is most commonly very great; and while the superior tact, industry, or good fortune of some enable them to realise large fortunes, the want of discernment, the less vigilant attention, or the bad fortune of others, frequently reduces them from the situation of capitalists to that of labourers.

The risk to which merchants are exposed, when they either sell off any commodity at a reduced price in anticipation of a fall, or buy at an advanced price in anticipation of a future rise, is a consequence of the extreme difficulty of ascertaining the true state of the fact with respect to the grounds on which an abundant or a deficient supply, or an increasing or decreasing demand, may be expected. Rules can here be of no service: every thing depends upon the talent, tact, and knowledge of the party. The questions to be solved are practical ones, varying in every case from each other; the skill of the merchant being evinced by the mode in which he conducts his business under such circumstances, or by his sagacity in discovering coming events, and appreciating their character, and the extent of their influence. Priority, but, above all, accuracy of intelligence, is in such cases of the utmost consequence. Without well-authenticated data to go upon, every step taken may only lead to error. The instances, indeed, in which speculations, apparently contrived with the greatest judgment, have ended in bankruptcy and ruin, from a deficiency in this essential requisite, are so very numerous, that every one must be acquainted with them. Hence the importance of selecting acute and cautious correspondents; and hence also the necessity of maturely weighing their reports, and of endeavouring, by the aid of information, gleaned from every authentic accessible source, to ascertain how far they may be depended upon.

The great cotton speculation of 1825 took its rise partly and chiefly from a supposed deficiency in the supply of cotton, partly from an idea that there was a greatly increased demand for raw cotton in this country and the continent, and partly from a belief that the stocks on hand were unusually low. Now, it is obvious that the success of those who embarked in this speculation depended entirely on two circumstances: viz. *first*, that they were right in the fundamental supposition on which the whole speculation rested, that the supply of cotton was no longer commensurate with the demand; and *second*, that their competition did not raise the price so high, as to diminish the consumption by the manufacturers in too great a degree to enable them to take off the quantity actually brought to market. Had the merchants been well founded in their suppositions, and had their competition not raised the price of cotton too high, the speculation would certainly have been successful. But instead of being well-founded, the hypothesis on which the whole thing rested was perfectly visionary. There was no deficiency in the supply of cotton, but, on the contrary, a great superabundance; and even if there had been a deficiency, the excess to which the price was carried must have checked consumption so much, as to occasion a serious decline. The falling off in the import of cotton from America in 1824, seems to have been the source of the delusion. It was supposed that this falling off was not accidental, but that it was a consequence of the price of cotton having been for a series of years inadequate to defray the expenses of its cultivation. The result showed that this calculation was most erroneous. And besides, in entering on the speculation, no attention was paid to Egypt and Italy, countries from which only about 1,400,000 lbs. of cotton were obtained in 1824, but from which no less than 23,800,000 lbs. were obtained in 1825! This unlooked for importation was, of itself, almost enough to overturn the combinations of the speculators; and, coupled with the increased importation from America and other countries, actually occasioned a heavy glut of the market.

When a few leading merchants purchase in anticipation of an advance, or sell in anticipation of a fall, the speculation is often pushed beyond all reasonable limits by the operations of those who are influenced by imitation only, and who have never perhaps reflected for a moment on the grounds on which a variation of price is anticipated. In speculation, as in most other things, one individual derives confidence from another. Such a one purchases or sells, not because he has any really accurate information as to the state of the demand and supply, but because some one else has done so before him. The original impulse is thus rapidly extended; and even those who are satisfied that a speculation, in anticipation of a rise of prices, is unsafe, and that there will be a recoil, not unfrequently adventure, in the expectation that they will be able to withdraw before the recoil has begun.

It may, we believe, speaking generally, be laid down as a sound practical rule, to avoid having anything to do with a speculation in which many have already engaged. The competition of the speculators seldom fails speedily to render an adventure, that might originally have been safe, extremely hazardous. If a commodity happen to be at an unusually reduced price in any particular market, it will rise the moment that different buyers appear in the field; and supposing, on the other hand, that it is fetching an unusually high price, it will fall, perhaps, far below the cost of its production, as soon as supplies begin to be poured in by different merchants. Whatever, therefore, may be the success of those who originate a speculation, those who enter into it at an advanced price are almost sure to lose. To have been preceded by others ought not, in such matters, to inspire confidence: on the contrary, it ought, unless there be something special in the case, to induce every considerate person to decline interfering with it.

The maintenance of the freedom of intercourse between different countries, and the more general diffusion of sound instruction, seem to be the only means by which those miscalculations that are often productive of great national, as well as private loss, can be either obviated or mitigated. The effects consequent on such improvident speculations being always more injurious to the parties engaged in them than to any other class, the presumption is, that they will diminish, both in frequency and force, according as the true principles of commerce come to be better understood. But whatever inconvenience may occasionally flow from them, it is abundantly plain, that instead of being lessened, it would be very much increased, were any restraints imposed on the freedom of adventure. When the attention of many individuals is directed to the same line of speculation; when they prosecute it as a business, and are responsible in their own private fortunes for any errors they may commit, they acquire a knowledge of the various circumstances influencing prices, and give, by their combinations, a steadiness to them which it is easy to see could not be attained by any other means. It is material, too, to bear in mind, as was previously stated, that many, perhaps it might be said *most*, of those who press so eagerly into the market when any new channel of commerce is opened, or when any considerable rise of price is anticipated, are not merchants, but persons engaged in other businesses, or living perhaps on fixed incomes, who speculate in the hope of suddenly increasing their fortune. A tendency to gambling seldom fails to break out upon such occasions; but fortunately these are only of comparatively rare occurrence; and, in the ordinary course of affairs, mercantile speculations are left to be conducted by those who are familiar with business, and who, in exerting themselves to equalise the variations of price, caused by variations of climate and of seasons, and to distribute the supply of produce proportionally to the effective demand, and with so much providence, that it may not, at any time, be wholly exhausted, perform functions that are in the highest degree important and beneficial. They are, it is true, actuated only by a desire to advance their own interests, but the results of their operations are not less advantageous than those of the agriculturist, who gives greater fertility to the soil, or of the mechanist, who invents new and powerful machines.

2. *Commercial Revulsions.*—By a commercial revulsion is usually meant a sudden decline in the prices of commodities, and the prevalence of distress either in one or more branches that were previously flourishing. Such revulsions are ascribable to a variety of causes; but, for the most part, they originate in some miscalculation on the part of the producer or dealer, and practically illustrate the principles already laid down.

Every exertion of industry involves a certain degree of speculation. The individual who buys raw cotton or raw silk, in the intention of manufacturing it into articles of dress or furniture, supposes that the article, when manufactured, will sell for a price sufficient to indemnify him for his expenses, and to leave him the customary profits on his capital. There is, however, a good deal of risk in an adventure of this sort: were the fashion to change while the articles are in preparation, it might be impossible to get them disposed of, except at a considerable loss; or, were new facilities given to the commerce with countries whence similar articles may be procured, or any discovery made which facilitated their production, their price would certainly fall, and the speculation would turn out an unprofitable one. But, how singular soever the statement may at first appear, it will be found that miscalculation and gluts are more frequently produced by an increase than by a decline in the demand for produce. Suppose that, owing to the opening of new markets, to a change of fashion, or to any other cause, the demand for hardware were suddenly increased: the consequences of such increased demand would be, that its price would immediately rise, and the manufacturers would obtain comparatively high profits. But the rate of profit cannot, unless monopolies interfere to prevent or counteract the operation of the principle of competition, continue for any considerable period, either higher or lower, in one employment, than in others. As soon, therefore, as this rise of price had taken place, additional capital would begin to be employed in its production. Those already engaged in the trade would endeavour to extend their business by borrowing fresh capital, while a number of those engaged in other businesses would withdraw from them and enter into it. Unluckily, however, it is next to certain that this transference of capital would not stop at the point when it would suffice to produce the additional supply of hardware at the old prices, but that it would be carried so much farther as to produce a glut, and a consequent revulsion. A variety of causes conspire to produce this effect; the advantages which any class of producers derive from an increased demand for their peculiar produce, are uniformly exaggerated, as well by that portion of themselves who are anxious, in order to improve their credit, to magnify their gains, as by those engaged in other employments. The adventurous and sanguine—those who are particularly disposed to take *omne ignotum pro magnifico*—crowd into a business which they readily believe presents the shortest and safest road to wealth and consideration; at the same time that many of that generally numerous class who have their capitals lent to others, and are waiting till a favourable opportunity occurs for vesting them in some industrious undertaking, are tempted to follow the same course. It occurs to few that the same causes which impel one to enter into a department that is yielding comparatively high profits are, most probably, impelling thousands. Confident in his own good fortune, the adventurer leaves a business to which he had been bred, and with which he was well acquainted, to enter, as a competitor, on a new and untried arena; while those already engaged in the advantageous business stretch their credit to the utmost, that they may acquire the means of extending their concerns, and of increasing the supply of the commodity in unusual demand. The result, that every unprejudiced observer would anticipate, almost invariably takes place. A disproportionate quantity of capital being attracted to the lucrative business, a glut of the market, and a ruinous depression of prices, unavoidably follow.

Those who investigate the history of industry, either in this or any other country, will find that a period of *peculiar* prosperity, in any one branch, is the almost uniform harbinger of mischief. If we turn, for example, to the history of agriculture, the alternation between periods of high prices and great agricultural prosperity, and of low prices and great agricultural distress, is so striking, that it cannot fail to arrest the attention of every one. The high prices of 1800 and 1801 gave an extraordinary stimulus to agricultural industry. Nearly *double* the number of acts of parliament were passed in 1802, for the inclosure and drainage of land, that had been passed in any previous year. A great extent of old grass-fields was, at the same time, subjected to the plough. And in consequence of this extension of cultivation, and of the improvements that were then entered upon and completed, the supply of corn was so much increased in 1804, that prices sunk considerably below the previous level; and an act was passed, in consequence of the representations made by the agriculturists of their depressed condition, granting additional protection against foreign competition. The high prices of 1810, 1811, 1812, and 1813, had a precisely similar result. They attracted so much fresh capital to the land, and occasioned such an extension of tillage, that we grew, in 1812 and 1813, an adequate supply of corn for our own consumption. And, under such circumstances, it is certain that the price of corn must have fallen, in consequence of the unusually abundant harvest of 1814, though the ports had been entirely shut against importation from abroad.

The history of the West India trade may also be referred to, as affording the most convincing proofs of the truth of this principle. The devastation of St. Domingo by the negro insurrection, which broke out in 1792, by first diminishing, and in a very few years entirely annihilating, the supply of 115,000 hhds. of sugar, which France and the continent had previously drawn from that island, occasioned an extraordinary rise of prices, and gave a proportional encouragement to its cultivation in other parts. So powerful was its influence in this respect, that Jamaica, which, at an average of the six years preceding 1799, had exported only 83,000 hhds., exported in 1801 and 1802 upwards of 286,000, or 143,000 a-year! But the duration of this prosperity was as brief as it was signal. The rise of price which had produced such effects in the British islands occasioned a similar, though less rapid, extension of cultivation in the colonies of the continental powers. The increased supplies of sugar and coffee that were in consequence obtained from Cuba, Porto Rico, Martinique and Guadaloupe, Brazil, &c., became, in no very long time, not only sufficient to fill up the vacuum caused by the cessation of the supplies from St. Domingo, but actually to overload the market. The great foreign demand for British plantation sugar, which had been experienced after the destruction of the St. Domingo trade, gradually diminished, until 1805 or 1806, when it almost entirely ceased; and the whole extra quantity raised in consequence of that demand, being thrown upon the home market, its price, which had been 66*s.* a cwt. in 1798, exclusive of duty, fell, in 1806, to 34*s.*, a price which the committee, that was then appointed by the House of Commons to inquire into the distresses of the planters, states, was not only insufficient to yield them any profit, but even to indemnify them for their actual outlay. And we may add, that owing to the ill-advised measures that were soon after adopted for creating a forced and unnatural demand for sugar, by substituting it, in the place of barley, in the distillery, its supply was prevented from being diminished in proportion to the diminution of the effective demand; and this circumstance, combined with the oppressive regulations on the trade of the islands, and particularly on their intercourse with the United States, have since retained the planters, some short intervals only excepted, in distress and difficulty.

The history of the silk-trade, of distillation, and indeed of every branch of industry, furnishes but too many proofs of the constant operation of this principle of compensation. The greater and more signal the peculiar prosperity of any one department, the greater, invariably, is the subsequent recoil. Such an increased demand for any commodity as would raise its price 10 per cent. above the common level, would certainly cause it to be produced in excess, and would, in consequence, occasion a revulsion. But were the price to rise 30 or 40 per cent. above the common level, the temptation to employ additional capital in its production would be so very great, that the revulsion would both take place sooner, and be incomparably more severe.

Revulsions of the sort now described will necessarily continue to occur, to a greater or less extent, under all systems of public economy. But there is nothing that would tend so much to lessen their frequency and violence, as a determination, on the part of government, to withhold all relief, except in cases of extreme necessity, from those who have the misfortune to be involved in them. It must be acknowledged that this seems rather a harsh doctrine; but, on examination, it will be found to be the only safe and really practicable line of conduct that government can follow. Almost all the restrictions and prohibitions which fetter our commerce and enterprise have been occasioned by government stepping out of its proper province, and interfering for the relief of those who had got themselves entangled in difficulties. By this means, a very large proportion of the industry of the country was at one time placed on an insecure foundation; and, notwithstanding the reforms that have been effected, a great deal is still in that situation. Merchants and manufacturers have been, in this way, partially relieved from that natural responsibility under which every man ought to act, and tempted to trust to the support given by government in the event of their speculations giving way. Were it possible, indeed, to grant such assistance without injury to the rest of the community, none would object to it; but, as this cannot be done, it appears not only that sound policy, but also that real humanity, would dictate the propriety of its being withheld in all but extreme cases.

We are happy to be able to corroborate what is now stated, by the authority of one of our ablest practical merchants. 'The only beneficial care,' says Mr. Alexander Baring, 'that a government can take of commerce, is to afford it general protection in time of war; to remove, by treaties, the restrictions of foreign governments in time of peace, and cautiously to abstain from any, however plausible, of its own creating. If every law of regulation, either of our internal or external trade, were repealed, with the exception of those necessary for the collection of revenue, it would be an undoubted benefit to commerce, as well as to the community at large. An avowed system of allowing things to take their own course, and of not listening to the interested solicitations of one class or another for relief, whenever the imprudence of speculation has occasioned losses, would, sooner than any artificial remedy, reproduce that equilibrium of demand and supply, which the ardour of gain will frequently derange, but which the same cause, when let alone, will as infallibly restore.

'The interference of the political regulator in these cases is not only a certain injury to the other classes of the community, but generally so to that in whose favour it is exercised. If too much sugar be manufactured in Jamaica, or too much cotton in Manchester, the loss of those concerned will soon correct the mischief; but if forced means are devised to provide for the former a temporary increase of demand, which cannot be permanently secured, a recurrence to that natural state of fair profit, which is most to be desired by the planter, is artificially prevented by the very means intended for his relief. If the cotton manufacturer, on the other hand, is to have his imprudences relieved at the expense of those employed on linen, silk, wool, or other materials, the injustice, as well as impolicy, of such a remedy, need no illustration.

'Whenever the assistance of government is called for by any class of traders or manufacturers, it is usual to make the most splendid display of the importance of that particular branch to the nation at large. The West and East India interests, the ship-owners, the manufacturers, the American merchants, have all the means of making these brilliant representations; but it should be recollected, that the interest of the state consists in the prosperity of the whole; that it is contrary to sound policy to advance one beyond its natural means, and still more to do so at the expense of others; and that the only mode of ascertaining the natural limits of each is *to leave them all alone*.'—(*Inquiry into the Causes and Consequences of the Orders in Council*, 1st ed. p. 133.)

The establishment of a free commercial system would operate powerfully to prevent improvident speculations. We should then engage only in those branches of industry for the prosecution of which we have some natural or acquired advantage, and which would, in consequence, be in a great measure secure against those unfavourable contingencies that are always affecting businesses fenced round with restrictions. Suppose, to illustrate the principle, that a really free trade were established in silks; we should export supplies of plain silks, of mixed fabrics of wool, cotton, and silk, and of gloves and hosiery, in which we have an advantage; at the same time that the greater part of our demand for fancy goods, and other articles of that description, would, most probably, be supplied by the foreigner. If, on the one hand, therefore, the deman for silks should, in consequence of change of fashion, or any other caus suddenly increase, the competition of th foreign manufacturers would preven prices attaining any very extravagan height, and would thereby prevent bot the inordinate extension of the manufacture and its subsequent recoil: an if, on the other hand, the demand fo silks in this country happened to declin the various foreign markets resorted t by our manufacturers would give then the means of disposing of their surplu goods, at a small reduction of pric compared to what must take place whe they are confined, as has hitherto bee principally the case, to the home marke —(*M'Culloch's Principles of Politic Economy*, 2d ed. pp. 203—209.)

2. *Abuse of Credit—Usury Laws.*—We are, however, inclined to think tha the principal cause of improvident commercial speculations, and of the rui which so frequently overtakes mercantile establishments, is to be sought fo in the abuse of credit, an abuse that ha prevailed in this country to an exter unknown anywhere else. At presen the practice is for manufacturers to receive orders, in the course of the yea from twenty or thirty commercial house for goods to be exported to the West Indies, South America, Germany, the Eas Indies, &c., the understood term of credit being from twelve to fifteen an eighteen months. Very frequently, however, the merchant does not receive remittances from abroad equal to th goods sent out; but he is led partly an principally by the facility of obtainin credit at home, and partly by assurance from his correspondents abroad that hi goods have been well sold, and tha their price will, no doubt, be speedil realized, to go on increasing his export till he becomes embarrassed, when bankruptcy either takes place, or he i obliged to act under an arrangemen with his creditors. Less business, probably, might be done were less credi given to exporters, but what was don would be transacted to far better purpose. Bankruptcy would be infinitel less frequent, and commerce woul not be infected with that gamblin spirit so utterly alien to the considerat forethought and sagacious enterpris that distinguish the best class of merchants.

The discount of bills at long dates i a great incentive to unsafe speculatio

When an individual obtains money which he is not to be called upon to pay for six, twelve, or eighteen months, he is tempted to adventure in undertakings that are not to terminate till some distant period; and the consequence is, that when the bill becomes due, he is very often unable to pay it, or can pay it only by withdrawing capital, at a great loss, from some line of business, or by making a new loan on very disadvantageous terms.

The bookselling trade may be referred to in proof of this statement. In all departments connected with it very long credits are given. In consequence, persons with a very limited amount of capital are tempted to engage in publishing adventures, the hazard of which is proverbially great; and when the time comes that they must discharge their obligations, they have no resource but to go, at once, into the Gazette, or to defer the crisis for a little, by throwing their publications upon the market at little more than the price of the paper. Hence the extremely unsatisfactory state of the publishing trade at this moment, and for many years past. Publishing is a department in which adequate capital, and good connexions, are more indispensable than in most others; but such is the nature of our credit system, that it frequently enables them to be entirely dispensed with; and instances may be specified in which individuals, who at no time were worth a sixpence, have contracted obligations to the amount of 50,000*l.*, or 100,000*l.*, and even more! Such a state of things is, in the highest degree, prejudicial to the interests of literature; and we are firmly convinced that the introduction of a system of ready-money payments, or of short credits, among booksellers, printers, paper-makers, and authors, would do more to promote its prosperity than any thing else.

The merchants of Holland have never been charged with any want of enterprise. On the contrary, they have been, at all times, ready to engage in any adventure, however remote or hazardous, that held out a reasonable prospect of even a moderate profit. This circumstance shows conclusively that long credits are not necessary to stimulate commercial enterprise; for Holland is, and always has been, a country of short credit. A discount is usually given for prompt payment, at the rate of one per cent. for six weeks, and of two per cent. for two months; but the terms of credit, on most articles, and the discount allowed for ready money, have been fixed by usage, and are regarded as essential conditions in all bargains:—'Rien en effet de plus facile que de s'établir à Amsterdam; mais rien de plus difficile que de s'y soutenir sans de grandes ressources. Dans cette ville, où l'argent abonde, où on le prête contre des sûretés à si bon marché, il est pourtant impossible de s'en procurer à crédit; et sans argent, il n'y a pas plus de possibilité d'y travailler, que de trouver quelqu'un qui veuille se charger d'un papier nouveau qui ne serait pas appuyé d'un crédit que l'opinion, la protection, ou des effets réels feroient valoir à la bourse. Les Hollandois suivent là-dessus des maximes très austères même à l'égard des maisons d'une certaine considération. Il est extrêmement difficile de trouver sur la bourse des personnes qui prennent du papier d'un négociant pour des plus fortes sommes que celles que peuvent comporter les affaires qu'on lui connoît.'—(*Ricard, Traité Général du Commerce*, tom. i., p. 212, ed. 1781.)

This extraordinary caution is not, however, a disadvantage, but the reverse. It hinders commerce from degenerating, as it has often done in other places, into gambling adventures, and places it on a comparatively solid foundation. As a proof of the excellence of this system, it is enough to state, that bankruptcies are rarer in Holland than in any other country. Notwithstanding the loss and interruption to all sorts of businesses, occasioned by the occupation of the country by the French in 1795, the failures in that and the subsequent season were not, comparatively, so numerous as in England in ordinary years. And during the recent convulsions growing out of the separation of Belgium, no suspicion was ever entertained of the solvency of any considerable Dutch house.

Various circumstances have contributed to that extension of credit which prevails in this country, but few, perhaps, have had more influence than the usury laws. It is singular that so oppressive a restriction should still be allowed to preserve its place in the statute-book. The rate of interest, like the rate of insurance, ought to vary according to the supposed risk, and other circumstances peculiar to each transaction. But in consequence of the limitation to five per cent., industrious and active young men, well acquainted with business, but without capital, who might obtain a loan from a monied friend at six, seven, or eight per cent., are frequently unable to borrow a single farthing. Such persons, therefore, if they attempt to escape from the routine drudgery of clerks, and to commence business on their own account, are obliged to buy on credit from the producers, that is, to borrow goods instead of money: and the sellers or lenders, to indemnify themselves for the risk they run in entering into a transaction of this sort, make an addition of from fifteen to twenty per cent. to the price at which they would be willing to sell their goods for ready money! And thus the preposterous limitation of the interest on pecuniary loans compels those who require accommodation to seek it in the shape of goods, at an enormous increase of cost, and with many other disadvantages. The producer who advances the goods may very probably be unable to postpone their payment beyond the term agreed upon; so that if they have not been sold, and a remittance received, the merchant must stop payment, unless he get a similar advance from some other producer. But had he obtained a loan of money, the result would have been very different. The cost of the goods being, in that case, comparatively low, they might have been sold with a profit at a much less price, so that the chance of their finding a market would have been considerably greater; and though they had not been sold, the capitalist who had made the loan, not having occasion for the money, and having confidence in the integrity and skill of the borrower, the latter would not be obliged to hurry a disadvantageous sale to meet his engagements. The effect of the usury laws is, in fact, to force loans to be made to the mercantile classes by those who are least able to spare them; that is, by those engaged in producing; whereas, were capitalists allowed openly to stipulate for interest proportioned to their real or supposed risks, advances would be made by wealthy individuals retired from active business, who are the very persons best able to make them, and by whom they ought to be made. At present the usury laws are less pernicious than during war; but even now it is not easy to exaggerate their mischievous influence in the way we have endeavoured to exhibit; and, as they [illegible] a single countervailing advantage to recommend them, their abolition ought not to be delayed.

4. *Habits of Saving.*—A good deal of the abuse of credit in this country, and no inconsiderable number of the bankruptcies that are so very frequent, may be ascribed to the national habits and mode of living. The circumstance of London being at once the residence of the court, and the commercial metropolis of the empire, has had both a favourable and an unfavourable influence on the mercantile character. The fashion is set by the nobility and other residents at the west end of the town; and the desire to be able to indulge in a similar scale of expense inspires the industrious classes with new ardour, and prevents any one from supposing that he has acquired an adequate fortune unless it will enable him to live in something like the fashionable style. Unluckily, however, many persons, some from a natural and laudable desire not to appear to belong to a lower class of society, others from a calculation that an expensive mode of living infers the possession of property, and will attract confidence and connexions, aspire too soon to distinction in the way of expense; and after an establishment has been formed, few have resolution, in the event of its proving too costly, to prune its luxuriancies, and to descend to a lower scale. Instead of attempting to repair their falling fortunes by retrenchment and economy, too many try to improve them by engaging in desperate adventures, that would be shunned by every prudent man; and which, in nine cases out of ten, accelerate the catastrophe. Of those that have become bankrupt, notwithstanding the possession of capital, skill, and connexions, a large number have been shipwrecked in the way now mentioned. This circumstance is seldom, indeed, brought prominently forward. We hear of losses from shipments to South America and India, from the impossibility of realising mortgages on West India property, from the decline in the price of stocks on hand, &c.; but we hear nothing of the expenditure of 3,000*l*., 5,000, or, it may be, 10,000*l*. a-year for a lengthened period, by those who ought not, at any time, to have spent more than 2,000*l*. It is this that by hindering the accumulation of a fund to meet any emergency, has been the real cause of the failure. It would be invidious to specify instances in proof

of what has been stated; they are incredibly numerous; and are well known to every mercantile man, and to every one who has had any intercourse with merchants.

In this respect, as well as in the habit of dealing on short credits, our merchants might profit by the example of the Dutch. In Holland, indeed, the spirit of parsimony seems to be carried to an absurd extent; and it would appear that fortunes are amassed not for the enjoyment that may be derived from them, but for the mere pleasure of amassing. We should be exceedingly sorry to see any such sordid spirit obtain an ascendency amongst our merchants; but there is a medium between the extreme economy of the Hollanders and the lavish expenditure of the English: and it is astonishing how much the curtailment of useless expense, such as the laying aside of superfluous servants, horses, &c., would do to increase the solvency of the mercantile classes, and their real respectability.

In London the outlay upon servants is immense; and it would seem, from the universality of the habit, as if the circumstance of a merchant or banker having his house encumbered with some half-dozen powdered lackeys, for three-fourths of which he has no manner of use, served as a guarantee of his solidity, and made his bills be readily negociated. The Dutch are far from this ridiculous affectation of lordly expense:—'Ils n'ont précisement que les domestiques qu'il leur faut; et ils sont bien fâchés, quand leurs circonstances exigent qu'ils en entretiennent beaucoup. Ils savent trop bien que cette canaille ne fait rien qu' embarrasser une maison, qu'elle y entretienne le désordre; que tandis que chacun cherche réciproquement à se décharger de son service sur quelqu'un de ses compagnons, le maître est réduit à se servir lui-même; que des gueux pareils sans industrie et sans éducation ne peuvent que se gater eux-mêmes entr'eux, et communiquer la corruption de leurs mœurs aux enfants même du maître. Ainsi ce n'est point par avarice, mais par prudence, qu'ils se passent de domestiques autant qu'ils le peuvent.'—(Lettres sur la Hollande, ii., p. 188.)

Ostentatious display ought carefully to be avoided by all who have not a large fortune independent altogether of the fortune required in carrying on trade. To those with straitened means it is certain destruction. It has been truly observed, that 'In the mercantile, as in other lines, the means of success are few and simple; not easy of attainment indeed, and requiring, above all, long continued perseverance, but less varied and complicated than a youthful mind is apt to imagine. Analyse the true qualities of a man of business, you will find they reduce themselves to fairness, vigilance, and steadiness,—fairness exemplified in declaring his terms at once, and in never deviating from an engagement; vigilance in superintending his assistants, his clerks, and his workmen; and steadiness in following up his proper line year after year, without turning to the right or the left in pursuit of speculative advantages. These, plain as they are, form the true virtues of mercantile life; the man who is known to possess them will be at no loss for connexions, and may safely leave to others the task of seeking a reputation for hospitality by their mode of living, of activity by the frequency of their solicitations, or of liberality by an unusual prolongation of credit.'—(Art. Commerce, Supp. Ency. Brit.)

CHAPTER VI.

Bounties—Drawbacks.

Bounties.—IT is unnecessary, after the discussions into which we have already entered, to engage in any lengthened inquiries as to the nature and effect of bounties. These are premiums paid by government to the exporters, and sometimes also to the producers, of certain species of goods. A government may, by the aid of prohibitions and Custom-house regulations, force its subjects to buy dear commodities instead of cheap ones; but the sphere of its influence is circumscribed by the boundaries of its own dominions, and does not extend to foreigners. What the patrons of the mercantile system could not effect in one way, they were, however, resolved to effect in another. Not being able to compel the foreigner to purchase comparatively high priced goods, they thought that the next best thing they could do was to sell them to him for less than they actually cost. Government pays a bounty or premium to the exporter; and he is thus enabled, or rather, we should say, compelled by the competition of others, to sell his goods in the foreign market for so much less than he could otherwise afford: in other words, government taxes the public to make a present to foreigners! 'Those trades,' says Dr. Smith, 'only require bounties in which the merchant is obliged to sell his goods for a price which does not replace to him his capital, together with the ordinary profit, or in which he is obliged to sell them for less than it really cost him to send them to market. The bounty is given in order to make up this loss, and to encourage him to continue, or perhaps to begin, a trade of which the expense is supposed to be greater than the returns, of which every operation eats up a part of the capital employed in it, and which is of such a nature that, if all other trades resembled it, there would soon be no capital left in the country.

'The trades, it is to be observed, which are carried on by means of bounties, are the only ones which can be carried on between two nations for any considerable time together, in such a manner as that one of them shall always and regularly lose, or sell its goods for less than it really costs to send them to market. But if the bounty did not repay to the merchant what he would otherwise lose upon the price of his goods, his own interest would soon oblige him to employ his stock in another way, or to find out a trade in which the price of the goods would replace to him, with the ordinary profit, the capital employed in sending them to market. The effect of bounties, like that of all other expedients of the mercantile system, can only be to force the trade of a country into a channel much less advantageous than that in which it would naturally run of its own accord.'—(Wealth of Nations, ii. p. 362.)

Dr. Smith has truly stated that premiums to artists and manufacturers who excel in their peculiar occupations are not liable to the same objections as bounties, commonly so called. At the same time, however, it is certainly true that these rewards ought not to be lavishly distributed, and that great judgment and discrimination are necessary to prevent them from degenerating into abuse. Generally speaking, the public is the best and most liberal patron of artists and inventors of every sort; and it is on its countenance and protection that they ought to be taught mainly to depend. By the device of patents the inventors and discoverers of useful processes are in most cases, though not always, enabled to derive such peculiar advantages from them, as are usually sufficient to stimulate them to fresh exertions of skill and ingenuity. In some departments of the useful arts, however, and in most departments of the fine arts, and the less popular branches of literature, the public patronage seldom affords a very adequate remuneration for the skill, industry, and ingenuity of those by whom they are advanced and perfected. There is no individual, perhaps, to whom this country is more signally indebted than to Richard Hargraves, the inventor of the spinning-jenny, who led the way in that wonderful career of discovery by which the British cotton manufacture has attained in so short a period to such unrivalled perfection. And yet, to the indelible disgrace of his age and nation, this most meritorious individual, by whose ingenuity millions have been enriched, was allowed to pass his days in poverty and neglect, and terminated his existence in the workhouse at Nottingham! Crompton, the inventor of the mule-jenny, met with somewhat better treatment, but not with such as he deserved. His invention has been of extraordinary utility; but not being at first aware of its value, he did not take out a patent for it, and only, indeed, perfected it by slow degrees. In 1812, however, he was advised to apply to parliament for a reward. The justice of his claim being admitted, a committee was appointed to investigate the circumstances. This committee reported that upwards of 4,000,000 spindles were employed on Crompton's principle; that two-thirds of the steam-engines for spinning cottons turned mules; and that the value of the buildings and machinery employed on the same principle, amounted to between 3,000,000*l.* and 4,000,000*l.* sterling. In consequence of this report, the House of Commons, as a mark of its high sense of his important services, voted Mr. Crompton a sum of—5000*l.*! Commentary on such a proceeding would be worse than useless. In whatever difficulties we may be involved, it cannot certainly be said that they have occurred by the public bounty being too liberally extended to the improvers of those arts which have raised us to eminence as a nation.

It would be wrong, perhaps, to devote any considerable portion of the public revenue to the encouragement of the fine arts, or of literary pursuits; but the glory which excellence in them confers on a nation, and the various advantages of which they are productive, ought to obtain for them a reasonable share of the bounty and patronage of government. The small sums expended by Louis XIV. in douceurs to literary men, and in the encouragement of the arts, has redounded infinitely more to his glory, and that of France, than even the most successful of his campaigns. The verses of Racine and Boileau will be read and admired long after the Chateau of Versailles is level with the dust.

Drawbacks.—The granting of drawbacks on goods exported is not liable to the same objections as the granting of bounties, and is, indeed, in most cases highly expedient. It may be necessary for fiscal purposes, that a duty should be laid on produce, part of which was previously exported to other countries. But, if this duty were levied on the produce exported to the foreigner, it would either narrow the demand for the article in the foreign market, or, which is most probable, it would tempt the foreigner to supply himself from some other quarter. And hence it is usual, in order to prevent foreign trade from being injuriously affected by internal taxes, to remit or draw back either the whole or part of the taxes paid on most articles when they are about to be exported. A measure of this sort does not, it is obvious, tend, like a prohibition or a bounty, to divert towards, or retain in any particular employment, a greater share of the capital and industry of the country than what naturally belongs to or would remain in it, but merely to hinder capital and labour from being forcibly drawn from one business to another. 'Drawbacks,' says Dr. Smith, 'do not tend to turn toward any particular employment a greater share of the capital of the country than what would go to that employment of its own accord, but only to hinder the duty from driving away any part of that share to other employments. They tend not to overturn that balance which naturally establishes itself among all the various employments of the society, but to hinder it from being overturned by the duty. They tend not to destroy, but to preserve, what it is in most cases advantageous to preserve, the natural division and distribution of labour in the society.'—(Wealth of Nations, ii. p. 352.)

We are surprised that the policy of granting a drawback has not been brought more prominently forward in the discussions with respect to the corn laws. The question as to the comparative amount of taxation falling on the agriculturists and the other classes, is of very difficult solution. We believe, however, were this the proper place for entering on such an investigation, that it might be satisfactorily shown that the agriculturists are more heavily taxed than any other description of producers; and that, consequently, they are entitled to claim that a duty corresponding to the *excess of taxes falling upon them* should be imposed on foreign corn when imported. Different opinions may be entertained as to the amount of this duty: but were it fixed at 6*s.* or 7*s.* a quarter on wheat, and on other grain in proportion, it would certainly be as much as the agriculturists can fairly claim. But whatever may be the amount of duty, and however imposed, it ought to be accompanied with an equivalent drawback. Justice cannot be otherwise done to the agriculturists. The duty on importation is imposed because the corn produced at home is subject to an excess of taxation, and when, therefore, such corn is exported, this excess ought to be remitted. This is a point on which Mr. Ricardo has expressed himself as follows:—'In allowing this drawback, we are merely returning to the farmer a tax which he has already paid, and which he must have to place him in a fair state of competition in the foreign market not only with the foreign producer, but with his own countrymen who are producing other commodities. It is essentially different from a bounty on exportation in the sense in which the word bounty is generally understood, for by a bounty is generally meant a tax levied on the people for the purpose of rendering corn unnaturally cheap to the foreign consumer; whereas, what I propose is, to sell our corn at the price at which we can really afford to produce it, and not to add to its price a tax which shall induce the foreigner rather to purchase it from some other country, and deprive us of a trade which, under a system of free competition, we might have selected.'—(On Protection to Agriculture, p. 53.)

At present the farmers are distressed as much or more by a luxuriant as by a deficient crop. Our population being comparatively dense, the imposition of duties on importation raises our average prices above the level of those of the surrounding states; so that whenever we happen to have an unusually luxuriant harvest the whole extra supply is thrown upon the home market, exportation being impracticable till the price has sunk ruinously low. The granting of a drawback would obviate this cause of fluctuation; and if it be just or expedient to impose a duty, it must be equally so to allow a drawback. It would not, however, be possible in the present state of the finances to grant a drawback corresponding to the duties now imposed on importation; and this, were there nothing else to urge, ought to suggest the policy of their reduction. We are firmly persuaded that a constant duty of *6s.* or *7s.* a quarter, with an equivalent drawback, would be incomparably more beneficial to the agriculturists than the present system; at the same time, that by giving freedom and security to the corn trade, it would tend to prevent injurious fluctuations of price, and would be in the highest degree advantageous to the public.

Chapter VII.

Commercial Treaties.

Commercial treaties have been negociated from a very remote era, and a good deal more stress has been laid upon them than they really seem to deserve. During the middle ages, indeed, while aliens or foreigners were exposed to the most inhospitable treatment, being frequently even made liable for the debts and crimes of others, commercial treaties were of considerable advantage, inasmuch as they stipulated for the suspension of those barbarous customs, and procured for foreigners that protection and security so essential to the prosecution of commercial undertakings. After the establishment of good order, and the growing intercourse among nations had abated the prejudices against strangers, it might have been supposed that commercial treaties would have gradually fallen into disuse, or been restricted to a few simple regulations for facilitating mercantile transactions. But at the same time that the real importance of commercial treaties declined, they acquired an adventitious value in the estimation of politicians and merchants, and began to be employed as one of the most efficacious instruments of the mercantile system. They have not consequently, with a few exceptions, been entered into for the purpose of mutually modifying restrictions, and giving greater facilities to commerce, but because each party imagined they were gaining some peculiar advantage at the expense of the other! And hence, almost all the commercial treaties negociated during the last 200 years are full of stipulations as to duties, the privileges to be enjoyed by the ships of either party in the ports of the other, &c. It is almost superfluous to add, that these imaginary advantages have commonly proved either useless or positively pernicious. It cannot be for the public advantage to show any favour to one set of foreigners more than to another. Common sense suggests the propriety of dealing in preference with those who supply us best and cheapest with the articles we want. Now, these, it is obvious, require no privileges. All that is necessary to the successful prosecution of the most extensive intercourse with them, is to *let it alone;* we deal with them because we find it most for our advantage, and it is evident that, if we put an end to this intercourse, by giving artificial privileges to others, we injure ourselves, and force our people to forsake the cheap shop, and to go to the dear! Such is the preposterous principle on which nine out of ten commercial treaties have been negociated. They have not been employed to remove the obstacles that oppose commerce, but to give it an artificial direction, to force it into channels in which it would not naturally flow, and in which it is sure to be least beneficial.

But it may be said, perhaps, that though a commercial treaty stipulating for some peculiar privilege, be disadvantageous to the country making the concession, it is proportionally advantageous to the one in whose favour it is made. In point of fact, however, such is not the case. Reciprocity is the beginning, the middle, and the end, of all commercial transactions. It is quite visionary to imagine that any nation will continue *bonâ fide* to grant to another an exclusive advantage, unless she obtains what she reckons a countervailing benefit; and if a commercial treaty stipulating for an exclusive privilege, be really observed on the part of the country by which it is conceded, we may be assured that the concessions made by the country in whose favour the privilege is granted are sufficient fully to balance it.

The famous commercial treaty negociated by Mr. Methuen with Portugal, in 1703, was long regarded as a masterpiece of its kind. Such, indeed, was the estimation in which it was held in the reign of George I., that it is stated in the British Merchant, a work of great authority at the time, that a statue ought to be erected to Mr. Methuen in every considerable town in the empire! So far, however, from these encomiums being deserved, it would be difficult to point out any transaction in the history of the country that has been more injurious to its commerce than this very treaty. Previously to 1700, British woollens had been admitted at a reasonable duty into Portugal, but at the epoch of the negociation of the treaty they were excluded. The main object of Great Britain in entering into this treaty was to procure the repeal of this prohibition, which was effected, but at an enormous cost. The treaty being short and often referred to, we subjoin it:—

'I. His sacred royal majesty of Portugal promises, both in his own name and that of his successors, to admit, for ever hereafter, into Portugal, the woollen cloths and the rest of the woollen manufactures of the British, as was accustomed till they were prohibited by law; nevertheless upon this condition:

'II. That is to say, that her sacred royal majesty of Great Britain shall, in her own name and that of her successors, be obliged, for ever hereafter, to admit the wines of the growth of Portugal into Britain; so that at no time, whether there be peace or war between the kingdoms of Britain and France, anything more shall be demanded for these wines by the name of custom or duty, or by whatsoever other title, directly or indirectly, or whether they shall be imported into Great Britain in pipes or hogsheads, or other casks, than what shall be demanded for the like quantity or measure of French wines, deducting or abating a third part of the custom or duty. But if at any time this deduction or abatement of customs, which is to be made as aforesaid, shall in any manner be attempted and prejudiced, it shall be just and lawful for his sacred royal majesty of Portugal again to prohibit the woollen cloths, and the rest of the British woollen manufactures.'

A more improvident bargain on our part could not have been entered into. The repeal of the prohibition of woollens was of infinitely more importance to the Portuguese than to the English. It should also be observed that in its repeal Portugal made no peculiar concessions to us; for, though she bound herself to admit our woollen cloths on the same terms as before the prohibition, she did not bind herself to admit them on lower terms than the woollens of France, Saxony, or any other country. And in return for this pitiful boon we bound ourselves 'for ever hereafter' to drink inferior wine bought at a comparatively high price! But the influence of this treaty in increasing the cost and deteriorating the quality of wine, was, perhaps, the least of its mischievous consequences. By excluding one of the principal equivalents the French had to give in exchange for our commodities, it lessened their ability to become the purchasers of our goods, at the same time that it tempted them to adopt retaliatory measures against our trade, and either to exclude our commodities altogether, or to burden them with prohibitory duties. It is owing more to the Methuen treaty than to anything else that the trade between Great Britain and France—a trade that ought to be the most extensive of any in the world—is confined within such narrow limits as hardly to be of more importance than the trade to Sweden.

The system of charging discriminating duties on French wine began previously to the negociation of the Methuen treaty, but it perpetuated the practice. The effect of these duties in changing the national taste has been most striking. Previously to the revolution the wines of France were very extensively consumed in England, to the almost total exclusion, indeed, of all others, except sherry. In 1687 the imports of French wine amounted to 15,518 tuns; in 1688, to 14,218 tuns; and in 1689, to 11,109 tuns. It is very doubtful whether a single tun of port wine had been imported into Great Britain previously to 1690; but after the wines of France had been loaded with heavy discriminating duties, our merchants began to import the wines of Oporto as a substitute for the red wines of the Bordelais; and the same cause that originally occasioned the introduction of port having continued to operate, it ultimately gained ground, so as almost wholly to exclude the former. The beverage that was forced upon us in the first instance by necessity, has become congenial from habit. At present, indeed, the taste of the nation runs so strongly in favour of port, that it will, most probably, be a considerable time before the late equalisation of the duty materially reduces the consumption of the latter.

Mr. Hume and Dr. Smith saw and ably pointed out the injurious operation of the Methuen treaty, and exposed the absurdity of our sacrificing the trade with France to that with so poor and beggarly a country as Portugal. 'Our jealousy and hatred of France,' said Mr. Hume, 'are without bounds. These passions have occasioned innumerable barriers and obstructions on commerce, where we are commonly accused of being the aggressors. But what have we gained by the bargain? We lost the French market for our woollen manufactures, and transferred the commerce of wine to Spain and Portugal, where we buy much worse liquor at a much higher price. There are few Englishmen who would not think their country absolutely ruined, were French wines sold in England so cheap and in such abundance, as to supplant ale and other home-brewed liquors. But, could we lay aside prejudice, it would not be difficult to prove that nothing could be more innocent, perhaps more advantageous. Each new acre of vineyard planted in France, in order to supply England with wine, would make it necessary for the French to take an equivalent in English goods, by the sale of which we should be equally benefited.'—(*Essay on the Balance of Trade.*) Such, however, is the force of prejudice, that it was not till last year that the Methuen treaty was finally abolished, and an end put to the discriminating duty on French wines.

A good many, however, of the impediments that have been thrown in the way of trade between England and France must be ascribed to political jealousy and rivalry. The provinces which our Norman monarchs possessed in France, and their wild efforts to conquer that kingdom kept for a lengthened period the two countries in almost incessant hostilities. And, in more modern times, the fear with which each has not unreasonably been impressed of any accession to the power of the other, and the false estimates so frequently formed of the real sources of power, have made them, even when at peace, distrust and frown upon each other. Had either party clearly perceived their real interests, they would have seen that they could not possibly lose anything, but would most probably gain a great deal, by cultivating a friendly intercourse. But prejudice triumphed over reason: each envied the prosperity, and was disposed to take fire at the fancied encroachments of the other; and disputes about barren rocks in the Atlantic, hunting grounds in America, and jungle in the East Indies, have been the worthless pretexts for engaging in wars that have filled the whole world with bloodshed and confusion. In this respect, however, mankind is, we hope, becoming more enlightened. 'If political economy had rendered no other service to mankind than to make them just and reasonable in these matters, it would be of incalculable benefit. It has taught us that human improvement, and national prosperity, are not promoted in any particular nation by depressing others, but by aiding, encouraging, and promoting the welfare of every nation around us; that we are all in our turn customers to each other, and that no man, or nation, can become wealthy by impoverishing his customers. The richer other nations are, the more they are enabled to purchase, the cheaper they can afford to sell, the more improved they become in all the arts of living, in all intellectual acquirements, in everything desirable for other nations to imitate or improve upon; that, if other nations become powerful by our assistance, we also of necessity become wealthy and powerful by our intercourse with them; and that peace and good neighbourhood are the means of mutual happiness among nations as among individuals. Formerly these doctrines were considered as the closet dreams of philosophers ignorant of actual life. The discussions of political economy have brought them more to the understanding and feelings of practical men engaged in commerce, or engaged in legislation; and we begin to see gleams of a brighter day in consequence of the lights thus diffused.'—(*Cooper's Lectures,* p. 209.)

Mr. Pitt has the merit of being one of the first British statesmen who clearly perceived the vast advantage that would redound to Great Britain and France were they to avail themselves of their capacities for carrying on a commercial intercourse. The Count de Vergennes, then minister of France, participated in Mr. Pitt's sentiments, and negociators being appointed by both parties, a commercial treaty was agreed upon in 1786. The object of this treaty was to introduce a more liberal system into the trade between the two countries, by moderating the severity of the existing restrictions; and, by familiarising both parties with the advantages of a more extensive intercourse, to teach them to forget their animosities, and to feel an interest in each other's welfare.

The speech made by Mr. Pitt, in vindication of this treaty, is highly deserving of attention; and whether we refer to the soundness of its general principles, or the ability with which they were enforced, can hardly be too much praised. France,' said he, 'was, by the peculiar dispensation of Providence, gifted, perhaps, more than any other country upon earth, with what made life desirable, in point of soil, climate, and natural productions. It had the most fertile vineyards and the richest harvests. The greatest luxuries of life were produced in it with little cost, and with moderate labour. Britain was not thus blessed by nature; but, on the other hand, it possessed, through the happy freedom of its constitution, and the equal security of its laws, an energy in its enterprise, and a stability in its exertions, which has gradually raised it to a high state of commercial grandeur; and, not being so bountifully gifted by heaven, it had recourse to labour and art, by which it had acquired the ability of supplying its neighbours with all the artificial embellishments of life, in exchange for their natural luxuries. Thus standing with regard to each other, a friendly connexion seemed to be pointed out between them, instead of that state of unalterable enmity which was falsely said to be their true political feeling towards one another.'

Having triumphantly refuted the commercial arguments against the treaty, Mr. Pitt inquired, in answer to an argument inculcating constant jealousy of France, 'whether, in using the word jealousy, it was meant to recommend to this country such a species of jealousy as should induce her either madly to throw away what was to make her happy, or blindly grasp at what must end in her ruin. Was the necessity of a perpetual animosity with France so evident and pressing, that for it we were to sacrifice every commercial advantage we might expect from a friendly intercourse with that country? or was a pacific connexion between the two kingdoms so highly offensive, that even an extension of commerce could not counterpoise it? The quarrels between France and Britain had too long continued to harass, not only these two great nations themselves, but had frequently embroiled the peace of Europe; nay, they had disturbed the tranquillity of the most remote parts of the world. They had, by their past conduct, acted as if they were intended for the destruction of each other; but he hoped the time was now come, when they would justify the order of the universe, and show that they were better calculated for the more amiable purposes of friendly intercourse and mutual benevolence.'—'Considering the treaty,' he continued, 'in a political point of view, he should not hesitate to contend against the too frequently advanced doctrine, that France was, and must be, the unalterable enemy of Britain. To suppose that any nation was unalterably the enemy of another, was weak and childish. It had neither its foundation in the experience of nations, nor in the history of man. It was a libel on the constitution of political societies, and supposed diabolical malice in the original frame of man.'

Mr. Fox opposed the treaty, not so much, perhaps, because he really looked upon it as a bad measure, as from party motives. In the House of Lords, the objections to it were most ably and successfully answered by the Marquis of Lansdowne; and, in the end, it was approved by large majorities in both Houses.

At the same time, however, we should be sorry were it supposed that we look upon the treaty of 1786 as one that should be taken for a model. The negociators were too much influenced by old notions, and the treaty is incumbered with too many conditions. When a few stipulations are agreed upon for giving facility and security to the transactions of merchants, in the buying and selling of such commodities as are not prohibited, for securing their persons and properties, in the event of hostilities breaking out, for the regulation of port-charges, &c., the most seems to be done that ought to be attempted in a commercial treaty. Such a compact may, indeed, bear that the goods and ships of the one party shall be admitted to the markets and ports of the other, on the footing of the most favoured nations, that is, that they shall not be loaded with discriminating duties, but here stipulations ought to stop. All commercial treaties fixing the duties to be paid in either country are radically objectionable. Every people ought always to be able to regulate its tariff as may seem best fitted to promote its own views, without being fettered by engagements with others. It may sometimes, indeed, be expedient to transact with a foreign country for the mutual abolition of duties or prohibitions; but this ought to be done by a convention for the particular object, the duration of which should be limited to a few years, so that, at its termination, each party may be free either to abide by it, or to enact other regulations. It is absurd to attempt to bind an independent nation to a policy which it considers injurious, by a condition in a commercial treaty, which is sure to be either openly or covertly defeated. The promotion of its own interest ought to be the object of every nation; and this will always be best done by dealing freely and liberally with others, not by grasping at oppressive privileges. ‘The proper way to establish a beneficial intercourse between France and England is for *each country to form its tariff with reference only to its own real interests*. If that be done, all is done that is necessary for the advantage of both countries in their commercial dealings with each other.’—(*Sir Henry Parnell on the Commercial Intercourse between France and England.*)

The lengthened and bloody contest that broke out in 1793 deprived the two countries of the advantages they were beginning to derive from the treaty of 1786; but a new, and, we trust, a more auspicious era is now commencing. Nations are beginning to take juster and more enlarged views of their real interests. The repeal, by England, of the discriminating duty on French wine is an earnest that a better spirit is prevailing in our councils; and, we doubt not, will be imitated by the French.

CHAPTER VIII.

1. *Trade of Great Britain with Foreign Countries.*—2. *Decline in the Real Value of the Exports.*—3. *Causes of the Magnitude of British Commerce.*

1. *Trade of Great Britain with Foreign Countries.*—No materials exist for furnishing any estimate, on which any dependence could be placed, of the amount of the articles annually produced and disposed of at home; but the following tables give a pretty complete view of the extent of our trade with other countries.

ACCOUNT of the Official Value of British and Irish Produce and Manufactures, and of Foreign and Colonial Produce and Manufactures, Exported from Great Britain and Ireland; distinguishing the several Countries; together with the Imports into Great Britain and Ireland from the same Countries; for the Year ending 5th January, 1831. (Parl. Papers, No. 388, Sess. 1831.)

COUNTRIES.	TRADE OF THE UNITED KINGDOM, In the Year ended 5th January, 1830.											
	GREAT BRITAIN.											
	OFFICIAL VALUE of IMPORTS.			OFFICIAL VALUE OF EXPORTS.								
				British and Irish Produce and Manufactures.			Foreign and Colonial Merchandize.			TOTAL EXPORTS.		
EUROPE:	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Russia	4,180,752	12	5	2,157,251	0	2	997,566	1	11	3,154,817	2	1
Sweden	187,711	2	8	54,726	18	3	103,490	0	5	158,216	18	8
Norway	67,859	15	5	95,794	14	3	49,772	17	10	145,567	12	1
Denmark	484,611	7	4	158,356	7	7	69,288	7	4	227,644	14	11
Prussia	1,295,569	19	1	252,576	3	8	533,590	15	5	786,166	19	1
Germany	1,597,854	1	5	8,384,262	8	1	1,829,101	14	11	10,213,364	3	0
The Netherlands	1,521,085	19	0	2,854,618	19	8	3,019,309	5	1	5,873,928	4	9
France	2,066,890	4	8	509,419	4	7	336,746	2	3	846,165	6	10
Portugal, Azores, and Madeira	373,823	16	8	2,327,862	18	9	60,940	3	1	2,388,803	1	10
Spain & the Canaries	1,074,184	17	7	1,555,518	7	0	259,219	13	0	1,814,738	0	0
Gibraltar	26,578	3	8	982,330	5	0	129,163	7	0	1,111,493	12	0
Italy	804,220	9	4	4,007,185	14	11	899,672	17	7	4,906,858	12	6
Malta	20,784	12	2	458,178	17	8	47,180	4	2	505,359	1	10
Ionian Islands	109,448	12	6	34,254	8	3	4,990	9	11	39,244	18	2
Turk. & Cont. Greece	431,062	6	2	1,393,054	18	9	83,072	8	5	1,476,127	7	2
Morea & Grk. Islands	9,657	2	2	—			—			—		
Isles Guernsey, Jersey, Alderney, and Man	273,788	9	3	304,352	14	6	98,228	9	3	402,581	3	9
	14,525,883	11	6	25,529,744	1	1	8,521,332	17	7	34,051,076	18	8

TABLE I.—(*Continued.*)

COUNTRIES.	OFFICIAL VALUE of IMPORTS.			OFFICIAL VALUE OF EXPORTS.								
				British and Irish Produce and Manufactures.			Foreign and Colonial Merchandise.			TOTAL EXPORTS.		
EUROPE:	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
(Brought forward.)	14,525,883	11	6	25,529,744	1	1	8,521,332	17	7	34,051,076	18	8
AFRICA:												
Egypt, Ports on Medit.	223,177	8	3	132,382	12	9	795	17	2	133,178	9	11
Trip., Barb., & Moroc.	30,558	3	1	.	.	.	453	0	0	453	0	0
W. Coast of Africa	258,245	2	1	350,336	17	0	161,171	16	4	511,508	13	4
Cape of Good Hope	232,598	9	6	347,003	5	3	36,424	9	7	383,427	14	10
Cape Verde Islands	.	.	.	93	6	4	.	.	.	93	6	4
St. Helena . .	5,813	12	7	30,047	18	0	1,604	4	2	31,652	2	2
Isle of Bourbon	.	.	.	16,137	5	4	1,328	18	11	17,466	4	3
Mauritius . .	438,714	9	10	255,522	14	0	24,448	11	5	279,971	5	5
ASIA:												
East Indies & China	7,859,883	1	1	5,856,287	5	2	605,841	1	9	6,462,128	6	11
N.S. Wales, V. Diemen's Land, & Swan River	125,720	8	3	257,071	1	5	87,578	3	2	344,649	4	7
N. Zealand & S. Sea Isl.	583	0	9	826	7	11	320	4	5	1,146	12	4
AMERICA:												
British N. Colonies	881,444	4	5	1,774,069	3	6	253,914	18	3	2,027,984	1	9
British West Indies	8,501,442	10	9	4,739,048	0	7	354,076	3	1	5,093,124	3	8
Foreign West Indies	402,457	11	11	1,819,366	1	1	47,528	1	1	1,866,894	2	2
United States .	6,103,142	10	3	5,734,926	18	7	248,424	1	7	5,983,351	0	2
Mexico . .	150,386	14	2	520,402	6	2	124,124	2	1	644,526	8	3
Guatemala .	11,464	2	1	—			—			—		
Columbia .	84,595	18	9	499,815	0	3	12,879	1	9	512,694	2	0
States of Rio de la Plata	536,050	19	3	1,289,055	14	10	17,337	19	0	1,306,393	13	10
Chili . .	61,514	5	11	1,375,742	11	2	12,955	15	0	1,388,698	6	2
Peru . .	69,839	11	8	376,552	11	1	13,176	4	5	389,728	15	6
Brazil . .	1,469,015	2	9	4,566,010	4	3	76,314	7	9	4,642,324	12	0
The Whale Fisheries	361,086	8	11	6	0	0	2,173	7	7	2,179	7	7
Total . £.	42,333,617	7	9	55,470,447	5	9	10,604,203	6	1	66,074,650	11	10
IRELAND . .	1,669,400	19	3	747,441	5	5	15,964	8	2	763,405	13	7
Total Imports and Exports of United Kingdom . . .	44,003,018	7	0	56,217,888	11	2	10,620,167	14	3	66,838,056	5	5

II. ACCOUNT of the Official and of the Real or Declared Values of the Exports of British and Irish Produce and Manufactures from Great Britain, from 1798 to 1830.

Years ended 5th Jan.	Official Value of Exports.	Declared Value of Exports.	Excess of Real Value over Official Value.	Years ended 5th Jan.	Official Value of Exports.	Declared Value of Exports.	Excess of Real Value over Official Value.
1799	£18,556,891	31,252,836	12,695,945	1818	£39,233,467	40,349,235	1,115,768
1800	22,284,941	35,903,850	13,618,909	1819	41,960,555	45,180,150	3,219,595
1801	22,831,936	36,929,007	14,097,071	1820	32,983,689	34,252,251	1,268,562
1802	24,501,608	39,730,659	15,229,051				
1803	25,195,893	45,102,330	19,906,437				
1804	20,042,596	36,127,787	16,085,191				Excess of Official Value over Real Value.
1805	22,132,367	37,135,746	15,003,379				
1806	22,907,371	37,234,396	14,327,025				
1807	25,266,546	39,746,581	14,480,035				
1808	22,963,772	36,394,443	13,430,671	1821	37,820,293	35,569,077	2,251,216
1809	24,179,854	36,306,385	12,126,531	1822	40,194,681	35,823,127	4,371,554
1810	32,916,858	46,049,777	13,132,919	1823	43,558,488	36,176,897	7,381,591
1811	33,299,408	47,000,926	13,701,518	1824	43,166,039	34,589,410	8,576,629
1812	21,723,532	30,850,618	9,127,086	1825	48,024,952	37,600,021	10,424,931
1813	28,447,912	39,334,526	10,886,614	1826	46,453,022	38,077,330	8,375,692
1814	. .	Records destroyed by fire.		1827	40,332,854	30,847,528	9,485,326
1815	33,200,580	43,447,373	10,246,793	1828	51,279,102	36,394,817	14,884,285
1816	41,712,002	49,653,245	7,941,243	1829	52,019,728	36,150,379	15,869,349
1817	34,774,521	40,328,940	5,554,419	1830	55,465,723	35,212,873	20,252,850

III. ACCOUNT of the Quantities of the Principal Articles of Foreign and Colonial Merchandise imported and retained for Home Consumption, and also the Quantity exported, in the year 1830 (fractional quantities omitted.)

		Quantities imported.	Retained for Home Consumption.	Quantities exported.
Ashes, pearl and pot	cwts.	162,258	143,657	19,780
Barilla	do.	165,338	236,563	—
Bark, oak, and cork tree	do.	1,009,816	1,004,070	—
Brimstone, rough	do.	302,038	313,766	—
Bristles	lbs.	1,715,488	1,695,083	—
Butter	cwts.	148,139	147,951	—
Cassia lignea	lbs	817,968	62,252	795,242
Cheese	cwts.	168,900	166,484	—
Cinnamon	lbs.	544,225	29,720	386,108
Cloves	do.	36,071	48,638	57,904
Cochineal	do.	288,456	127,954	153,738
Cocoa-nuts	do.	3,209,933	393,847	1,674,613
Coffee	do.	39,071,215	19,466,028	23,023,410
Copper, unwrought	cwts.	10,267	14	13,743
Cork, unmanufactured	do.	46,494	45,636	—
Corn:—				
Wheat	qrs.	1,544,969	1,267,914	62,190
Barley	do.	281,713	202,405	10,297
Oats	do.	541,858	192,889	58,635
Rye	do.	65,910	65,331	7,861
Pease and beans	do.	82,139	96,513	2,345
Wheat-meal and flour	cwts.	461,895	337,065	70,652
Cortex Peruvianus or Jesuits' bark	lbs.	405,552	103,695	296,382
Cotton, piece goods of India, not printed	pieces	1,403,397	value £44,883	614,085
Cottons, printed	sq. yds.	131,420	2,873	171,969
Currants	cwts.	119,927	114,076	—
Dye and hard woods:—				
Fustic	tons	7,364	6,006	—
Logwood	do.	13,893	8,851	6,226
Mahogany	do.	19,335	16,546	—
Elephants' teeth	cwts.	4,345	3,605	—
Figs	do.	21,938	19,702	—
Flax and tow, and codilla of hemp, &c.	do.	922,039	909,709	—
Furs:—				
Bear	number	12,583	884	14,227
Beaver	do.	76,427	68,665	—
Fitch	do.	278,740	278,846	—
Martin	do.	151,937	121,741	49,712
Mink	do.	77,361	34,109	—
Musquash	do.	1,070,016	491,978	281,347
Nutria	do.	618,187	629,170	—
Otter	do.	14,862	857	14,751
Onger	cwts.	11,007	5,947	11,209
Gum:—				
Arabic	do.	8,232	17,249	2,049
Lac-dye	lbs.	594,494	462,988	26,763
Shell-lac	do.	703,886	316,070	446,598
Hats, straw	number	160,195	234,254	—
Hemp, undressed	cwts.	374,932	422,121	—
Hides, untanned	do.	286,416	231,874	—
Indigo	lbs.	6,748,281	2,113,830	4,286,605
Iron in bars	tons	15,720	13,067	3,024
Lead, pig	do.	1,508	35	1,700
Leather gloves	pairs	865,157	837,208	—
Lemons and Oranges:—				
Packages not exceeding 5000 cubic inches		53,215	48,921	—
Ditto above 5000, and not exceeding 7300		130,946	130,348	—
Ditto above 7300, and not exceeding 14,000		67,336	65,669	—
Linens,—Cambrics, &c.	pieces	40,778	41,224	—

		Quantities imported.	Retained for Home Consumption.	Quantities exported.
Linens, plain and diaper:—				
Entered by the ell	ells	372,697	—	451,533
Entered by the piece	pieces	31,638	—	30,175
Entered by the square yard	sq. yds.	138,458	692	124,200
Entered at value	£.	4,031	6,674	1,144
Liquorice juice	cwts.	4,440	5,795	—
Mace	lbs.	6,841	14,254	20,106
Madder	cwts	70,017	69,658	—
Madder root	do	33,541	39,804	—
Molasses	do.	394,432	386,142	—
Nutmegs	lbs.	38,868	113,273	47,913
Oil:—				
Castor	lbs.	396,104	293,028	—
Olive	gallons	1,153,834	1,334,758	—
Palm	cwts.	179,945	175,393	—
Train—Blubber	tuns	5,754	5,754	—
Spermaceti	do.	5,571	5,694	—
Not blubber or spermaceti	do.	11,974	9,047	—
Opium	lbs.	48,634	23,970	41,919
Pepper	do.	2,015,184	1,933,641	2,962,063
Pimento	do.	3,599,268	339,013	2,732,493
Prunes	cwts.	6,283	6,245	—
Quicksilver	lbs.	635,905	162,816	575,552
Raisins	cwts.	145,750	121,737	—
Rhubarb	lbs.	146,881	33,673	91,738
Rice	cwts.	222,547	116,854	95,584
Rice in the husk	bushels	293,354	222,472	—
Safflower	cwts.	4,623	4,370	—
Sago	do.	486	4,026	—
Saltpetre	do.	176,489	155,095	34,537
Sarsaparilla	lbs.	228,164	104,679	—
Seeds:—				
Clover	cwts.	40,529	88,662	—
Flax and Linseed	bushels	2,052,258	1,899,936	—
Rape	do.	378,304	375,162	—
Tares	do.	87,101	101,160	—
Senna	lbs.	187,492	122,601	—
Shumac	cwts.	80,191	78,874	—
Silk:—				
Raw and waste	lbs.	3,594,754	2,601,516	221,412
Thrown	do.	211,179	168,985	26,715
Manufactures of Europe	do.	132,313	121,584	6,909
——— ——— India, viz.:—				
Bandanas, Romals, &c.	pieces	99,393	67,465	79,886
Crape in pieces	do.	53	Before July 5, lbs. 7,675 After July 5, £5,926	602
Crape scarfs, shawls, &c.	number	70,299		13,981
Taffaties, damasks, &c.	pieces	9,052		4,064
Skins:—				
Calf and kid, untanned	cwts.	43,764	43,046	—
Deer, undressed	number	123,276	36,314	101,387
Goat, undressed	do.	306,579	182,062	113,724
Kid, undressed	do.	106,319	107,513	—
——, dressed	do.	591,094	591,091	—
Lamb, undressed	do.	1,888,487	1,887,891	—
Seal, undressed	do.	289,541	262,446	—
Smalts	lbs.	376,675	353,468	—
Spelter	cwts.	84,603	12,430	79,279
Spirits:—				
Rum	proof gallons	6,938,426	3,375,866	1,644,663
Brandy	do.	1,994,649	1,300,746	661,097
Geneva	do.	177,847	37,146	148,176
Sugar, unrefined	cwts.	4,856,393	3,539,821	297,912
Tallow	do.	1,177,908	1,024,993	—

		Quantities imported.	Retained for Home Consumption.	Quantities exported.
Tar	lasts	5,812	6,492	—
Tea	lbs.	30,544,404	29,495,205	251,971
Timber:—				
Battens and Batten ends	great hundreds	11,149	11,065	—
Deals and Deal ends	do.	51,587	51,890	—
Lathwood	fathoms	10,386	10,282	—
Masts, yards, &c., under 12 inches diameter	number	13,475	13,676	—
Ditto, 12 inches and above	do.	4,803	5,591	—
Oak-plank, 2 inches thick or upwards	loads	1,433	1,551	—
Staves	great hundreds	95,953	89,009	—
Teak	loads	16,924	16,835	—
Timber, 8 inches square or upwards	do.	549,259	541,565	—
Wainscot logs, ditto	do.	4,221	3,407	—
Tin	cwts.	2,674	2	2,581
Tobacco, unmanufactured	lbs.	22,399,335	18,819.021	7,369,749
Tobacco, manufactured, and snuff	do.	169,634	66,743	27,813
Turpentine, not worth more than 12*s*. per cwt.	cwts.	262,832	277,509	—
Valonia	do.	111,391	110,773	—
Wax, bees'	do.	11,699	6,568	—
Whale-fins	do.	13,305	12,876	—
Wool, cotton	lbs.	222,767,767	204,097,037	30,289,115
Wool, sheep's	do.	21,525,542	22,614,550	406,566
Wine:—				
Cape	gallons	967,363	579,744	20,162
French	do.	498,320	365,336	109,292
Portugal	do.	2,405,342	2,682,084	246,670
Spanish	do.	2,841,030	1,964,162	442,881
Madeira	do.	320,581	229,392	168,446
Canary	do.	199,026	101,699	115,640
Rhenish	do.	85,858	76,396	9,153
Other sorts	do.	300,677	218,839	85,366
Yarn, linen, raw	cwts.	29,646	29,645	—
Zaffa	lbs.	158,026	157,085	—

2. *Decline in the Real Value of the Exports.*—The increase in the official, and the decline in the real or declared value of the exports, since 1815, has given rise to a great deal of irrelevant discussion. It has been looked upon as a proof that our commerce is daily becoming less prosperous, whereas, in point of fact, a precisely opposite conclusion should be drawn from it. We have already stated, that the rates according to which the official values of the exports are determined, were fixed so far back as 1696, so that they have long ceased to be of importance, as affording any criterion of their actual value, their only use being to show the fluctuations in the *quantities* exported. To remedy this defect, a plan was formed, during the early part of Mr. Pitt's administration, for keeping an account of the *real* value of the exports, as ascertained by the declarations of the exporters. Those who contend that our trade is getting into a bad condition, argue that the great increase in the official value of the exports since 1815, shows that the *quantity* of the articles exported has been proportionally augmented; while the fall in their real value shows that we are selling this larger quantity for a smaller price, a result which they affirm is most injurious. But the circumstance of a manufacturer, or a merchant, selling a large or a small quantity of produce at the same price, affords no criterion by which to judge as to the advantage or disadvantage of the sale; for, if in consequence of improvements in the arts, or otherwise, a particular article may now be produced for half the expense that its production cost ten or twenty years ago, it is obvious that double the quantity of it may be afforded at the same price, without injury to the producers. Now, this is the case with some of the most important articles exported from England. Cottons, and cotton-twist, form a full half,

or more, of our entire exports; and, since 1814, there has been an extraordinary fall in the price of these articles, occasioned partly by cotton wool having fallen from about 1*s.* 6*d.* per lb. to about 7*d.* per lb., but more by improvements in the manufacture. To such an extent have these causes operated, that yarn, No. 40, which cost, in 1812, 2*s.* 6*d.*, cost, in 1830, 1*s.* 2½*d.*; in 1812, No. 60 cost 3*s.* 6*d.*, in 1830 it cost 1*s.* 10½*d.*; in 1812, No. 80 cost 4*s.* 4*d.*, in 1830 it cost 2*s.* 6¾*d.*, and so on; and in the weaving department the reduction has been similar. Hence, while the official value of the exports of cotton goods and twist has increased from about 18,000,000*l.* in 1814, to about 37,000,000*l.*, in 1830, their declared value has sunk from about 20,000,000*l.* at the former period, to about 16,000,000*l.* at the latter. Surely, however, this is, if anything can be, a proof of increasing prosperity: it shows that we can now export, and sell with a profit, (for, unless such were the case, does any one imagine the exportation would continue?) nearly double the quantity of cotton goods and yarn we exported in 1814, for about the same price. In so far, therefore, as an abundant and cheap supply of cottons may be supposed to increase the comforts of society, it is plain they must be about double, not in this country only, but in all those countries to which we export.—(*M'Culloch's Dictionary of Commerce*, Article COTTON.)

Owing to the fall that has taken place in the prime cost, and consequently in the price, of most of the principal articles of import, we obtain, at this moment, a much larger quantity of the produce of other countries in exchange for the articles we send abroad, than at any former period. The fall has been particularly sensible in the great articles of sugar, sheep's-wool, cotton-wool, corn, indigo, pepper, &c. The imports of all sorts of foreign merchandise have been increasing rapidly since 1815; and it is material to bear in mind, that we had no gold coin in circulation at that epoch, and that, besides the greater quantities of other articles, we have imported, in the intervening period, an extra supply of from 40 to 50,000,000*l.* of gold and silver. The truth is, therefore, that, instead of the decline in the real value of our exports having been in any degree prejudicial, it has been, in all respects, distinctly and completely the reverse. It has ensured for our goods a decided superiority in every market, while, as the cost of the articles has fallen in an equal degree, their production continues equally advantageous. It appears, too, that a similar fall has been going on in other countries; that if we send more goods to the foreigners, they send us more of theirs in return. Instead of being an evidence of decline, increased facilities of production and increased cheapness are the most characteristic and least equivocal marks of commercial prosperity.

3. *Causes of the Magnitude of British Commerce.*—The immediate cause of the rapid increase and vast magnitude of the commerce of Great Britain is, doubtless, to be found in the extraordinary improvements, and consequent extension, of our manufactures since 1770. The cotton manufacture may be said to have grown up during the intervening period. It must also be borne in mind, that the effect of an improvement in the production of any article in considerable demand is not confined to that particular article, but extends itself to others. Those who produce it according to the old plan, are undersold unless they adopt the same or similar improvements; and the improved article, by coming into competition with others for which it may be substituted, infuses new energy into their producers, and impels every one to put forth all his powers, that he may either preserve his old, or acquire new advantages. The cotton manufacture may be said to be the result of the stupendous inventions and discoveries of Hargraves, Arkwright, Crompton, and a few others; but we should greatly underrate the importance of their inventions, if we supposed that their influence was limited to this single department. They imparted a powerful stimulus to every branch of industry. Their success, and that of Watt and Wedgwood, gave that confidence to genius so essential in all great undertakings. After machines had been invented for spinning and weaving cottons whose fineness emulates the web of the gossamer, and steam-engines had been made 'to engrave seals, and to lift a ship like a bauble in the air,' everything seemed possible—*nil arduum visum est.* And the unceasing efforts of new aspirants to wealth and distinction, and the intimate connexion of the various arts and sciences, have extended and perpetuated the impulse given by the

invention of the spinning-frame and the steam-engine.

The immense accumulation of capital that has taken place since the close of the American war has been at once a cause and a consequence of our increased trade and manufactures. Those who reflect on the advantages which an increase of capital confers on its possessors can have no difficulty in perceiving how its increase operates to extend trade. It enables them to buy cheaper, because they buy larger quantities of goods, and pay ready money; and, on the other hand, it gives them a decided superiority in foreign markets where capital is scarce, and credit an object of primary importance with the native dealers. To the manufacturer, an increase of capital is of equal importance, by giving him the means of constructing his works in the best manner, and of carrying on the business on such a scale as to admit of the most proper distribution of whatever has to be done among different individuals. These effects have been strikingly evinced in the commercial history of Great Britain during the last half century; and thus it is, that capital, originally accumulated by means of trade, gives, in its turn, nourishment, vigour, and enlarged growth to it.

The improvement that has taken place in the mode of living during the last half century has been partly the effect, and partly the cause, of the improvement of manufactures, and the extension of commerce. Had we been contented with the same accommodations as our ancestors, exertion and ingenuity would long since have been at an end, and routine have usurped the place of invention. Happily, however, the desires of man vary with the circumstances under which he is placed, extending with every extension of the means of gratifying them, till, in highly civilised countries, they appear almost illimitable. This endless craving of the human mind, its inability to rest satisfied with previous acquisitions, combined with the constant increase of population, renders the demand for new inventions and discoveries as intense at one period as at another, and provides for the continued advancement of society. What is a luxury in one age, becomes a necessary in the next. The fact of Queen Elizabeth having worn a pair of silk stockings was reckoned deserving of notice by contemporary historians; while, at present, no individual, in the rank of a gentleman, can go to dinner without them. The lower classes are continually pressing upon the middle; and these, again upon the higher; so that invention is racked, as well to vary the modes of enjoyment, as to increase the amount of wealth. That this competition should be, in all respects, advantageous, is not to be supposed. Emulation in show, though the most powerful incentive to industry, may be carried to excess; and has certainly been ruinous to many individuals, obliged sometimes, perhaps, by their situation, or seduced by example, to incur expenses beyond their means. We have already pointed out the peculiarly destructive influence of improvident expenditure on the circumstances and condition of merchants; but the abuse, even when most extended, as it probably is in England, is, after all, confined within comparatively narrow limits; while the beneficial influence resulting from the general diffusion of a taste for improved accommodations adds to the science, industry, wealth, and enjoyments of the whole community.

We are also inclined to think that the increase of taxation, during the late war, contributed to the improvement of manufactures, and the extension of trade. The gradually increasing pressure of the public burthens stimulated the industrious portion of the community to make corresponding efforts to preserve their place in society; and produced a spirit of invention and economy that we should have in vain attempted to excite by any less powerful means. Had taxation been very oppressive, it would not have had this effect; but it was not so high as to produce either dejection or despair, though it was, at the same time, sufficiently heavy to render a considerable increase of exertion and parsimony necessary, to prevent it from encroaching on the fortunes of individuals, or, at all events, from diminishing the rate at which they were previously accumulating. To the excitement afforded by the desire of rising in the world, the fear of falling superadded an additional and powerful stimulus; and the two together produced results that could not have been produced by the unassisted operation of either. We do not think that any evidence has been, or can be, produced to show, that the capital of the country would have been materially greater than it is, had the tranquillity of Europe been maintained uninterrupted from 1793 to the present moment.

We do not state these circumstances in order to extenuate the evils of war, or of oppressive taxation; but merely to show the real influence of taxation on industry, when gradually augmented and kept within reasonable bounds. Under such circumstances, it has the same influence on a nation that an increase of his family, or of his unavoidable expenses, has on a private individual.

But after every fair allowance has been made for the influence of the causes above stated, and others of a similar description, still it is abundantly certain that a liberal system of government, affording full scope for the expansion and cultivation of every mental and bodily power, and securing all the advantages of superior talent and address to their possessors, is the grand *sine qua non* of commercial and manufacturing prosperity. Where oppression and tyranny prevail, the inhabitants, though surrounded by all the means of civilization and wealth, are invariably poor and miserable. In respect of soil, climate, and situation, Spain has a decided advantage over Great Britain; and yet, what a miserable contrast does she present, when compared with England! The despotism and intolerance of her rulers, and the want of good order and tranquillity, have extinguished every germ of improvement in the Peninsula, and sunk the inhabitants to the level of the Turks and Moors. Had a similar political system been established in England, we should have been equally depressed. Our superiority in science, arts, and arms, though promoted by subsidiary means, is, at bottom, the result of *freedom* and *security*—freedom to engage in every employment, and to pursue our own interest in our own way, coupled with an intimate conviction, derived from the nature of our institutions, and their opposition to every thing like arbitrary power, that acquisitions, when made, may be securely enjoyed or disposed of. These form the grand sources of our wealth and power. There have only been two countries, Holland and the United States, which have, in these respects, been placed under nearly the same circumstances as England; and, notwithstanding they inhabit a morass, defended only by artificial mounds, from being deluged by the ocean, the Dutch have long been, and still continue to be, the most prosperous and opulent people of the continent; while the Americans, whose situation is more favourable, are advancing in the career of improvement with a rapidity hitherto unknown. In Great Britain we have been exempted, for a lengthened period, from foreign aggression and intestine commotion; the pernicious influence of the feudal system has long been at an end; the same equal burthens have been laid on all classes; we have enjoyed the advantage of liberal institutions, without any material alloy of popular licentiousness or violence; our intercourse with foreign nations, though subjected to many vexatious restraints, has been comparatively free; full scope has been given to the competition of the home producers; the highest offices have been open to deserving individuals; and, on the whole, the natural order of things has been less disturbed amongst us by artificial restraints than in most other countries. But without security, no degree of freedom would have been of material importance. Happily, however, every man has felt satisfied, not only of the temporary, but of the permanent tranquillity of the country, and of the stability of its institutions. The plans and combinations of the capitalists have not been affected by misgivings as to what might take place in future. Monied fortunes have not been amassed in preference to others, because they might be more easily sent abroad in periods of confusion and disorder; but all individuals have unhesitatingly engaged, whenever an opportunity offered, in undertakings of which a remote posterity was alone to reap the benefit. No one can look at the immense sums expended upon the permanent improvement of the land, on docks, warehouses, canals, &c., or reflect for a moment on the settlements of property in the funds, and on the extent of our system of life insurance, without being deeply impressed with the vast importance of that confidence which the public have placed in the security of property, and the good faith of government. Had this confidence been imperfect, industry and invention would have been paralysed; and much of that capital which feeds and clothes the industrious classes would never have existed. The preservation of this security entire, both *in fact and in opinion*, is essential to the public welfare. If it be anywise impaired, the colossal fabric of our prosperity will crumble into dust; and the commerce of London, Liverpool, and Glasgow, like that of Tyre, Carthage, and Palmyra, will, at no very remote period, be famous only in history.

CHAPTER IX.

English legislation with respect to Aliens — Conditions under which Aliens at present reside in the Kingdom—Policy of these Conditions.

THOUGH most commonly overlooked by writers on commerce, the regulations as to the residence of aliens or foreigners visiting a country have a material influence on its trade and on the arts carried on in it. We need, therefore, make no apology for submitting a few statements as to this important subject.

The English legislation, with respect to aliens, has fluctuated, according as enlarged and liberal, or as narrow and selfish views of national policy have predominated. It is worthy of remark, that a clause is inserted in Magna Charta, which has the encouragement of commerce for its object; and which bears, that 'all merchants (if they were not openly prohibited before) shall have safe and sure conduct to depart out of and to come into England, to reside in and go through England, as well by land as by water; to buy and sell without any manner of evil tolls, by the old and rightful customs, except in time of war; and if they be of a land making war against us, and such be found in our nation at the beginning of the war, they shall be attached without harm of body or goods, until it be known unto us, or our chief justice, how our merchants be entreated in the land making war against us; and if our merchants be well entreated there, shall be so likewise here.'

But notwithstanding this clause, and the efficient support very frequently afforded by our kings and nobles to foreign merchants and artizans, they have, generally speaking, been the objects of popular hatred. A prejudice against foreigners seems, indeed, to be indigenous to all rude, or imperfectly civilised nations. The early Greeks and Romans regarded strangers as a species of enemies, with whom, though not actually at war, they maintained no sort of friendly intercourse. *Hostis apud antiquos peregrinus dicebatur*, says Poponius Festus. (See also Cicero de Officiis, lib. i., cap. 12.) Until the era of Edward I. the stipulation in the Great Charter as to foreign merchants seems to have been little attended to. It is doubtful whether, previously to his reign, they could either hire houses of their own, or deal except through the medium of some Englishman. But this intelligent prince saw the advantage that would result to the trade and industry of his subjects from the residence and intercourse of Germans, Flemings, Italians, and other foreigners, who, at that time, were very superior to the English in most branches of manufactures and commerce. He, therefore, exerted himself to procure a repeal of some of the more oppressive restrictions on aliens, and gave them a charter which conveyed considerable privileges*. Down, however, to the reign of Edward III., it continued to be customary to arrest one stranger for the debt, and even to punish him for the crimes and misdemeanours of others! It may appear extraordinary that the gross injustice of this barbarous regulation ever permitted it to be adopted; and yet it was probably, at one period, the common law of most European states. As soon, however, as the foundations of good order and civilisation began to be laid, its operation was seen to be most pernicious. In 1325, Edward II. entered into a convention with the Venetians, in which it was expressly stipulated that they should have full liberty to come to England to buy and sell commodities, without being liable for the debts or crimes of others. Conventions to the same effect were entered into with other foreigners. At length, in 1353, this disgraceful practice was put an end to by 27 Edward III., stat. ii., cap. 17; it being provided in this statute, not only that no stranger shall be impeached for the trespass or debt of another, but that in the event of a war breaking out with any foreign power, its subjects, residing amongst us, shall be warned thereof by proclamation, and be allowed forty days to arrange their affairs, and to depart out of the kingdom; and that, under special circumstances, this term may be extended. There are few acts in the statute-book that reflect more credit on their proposers, or that have been more advantageous than this.

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* This charter was confirmed by Edward III. in 1328. Among other clauses, it has the following, viz.: 1st. That on any trial between foreigners and Englishmen, the jury shall be half foreigners; 2nd. That a proper person shall be appointed in London to be justiciary for foreign merchants; and 3rd. That there shall be but one weight and measure throughout the kingdom. Anderson, Anno 1302.

Perhaps, however, the reign of Edward III. is, in a commercial point of view, still more remarkable, from its being the era of very great improvements in the woollen manufacture. In 1331, Edward, judiciously availing himself of some discontents amongst the manufacturers in Flanders, invited them over to England. Historians mention that an extensive manufacturer, of the name of John Kemp, was the first who accepted this invitation. Having come over, with his workmen and apprentices, he was most graciously received by the king, who took him under his immediate protection; and published a proclamation, promising the like reception to all foreign weavers, dyers, and fullers, who should come and settle in England. In consequence about seventy families of Flemish manufacturers are said to have come over in the course of the same year; and these were followed by many more during the subsequent years of King Edward's reign. These wise and politic measures were, however, exceedingly unpopular. The foreigners were openly insulted, and their lives endangered in London and other large towns; and a few of them in consequence returned to Flanders. But Edward was not to be driven from his purpose by an unfounded clamor of this sort. A proclamation was issued, in which every person accused of disturbing or attacking the foreign weavers was ordered to be committed to Newgate, and threatened with the utmost severity of punishment. In a parliament held at York, in 1335, an act was passed for the better protection and security of foreign merchants and others, by which penalties were inflicted on all who gave them any disturbance. This seems to have had the effect, for a while, at least, of preventing any outrages.

The corporations of London, Bristol, and other great towns, have been at all times the principal enemies to the immigration of foreigners. Perhaps, indeed, they were not more hostile to them than to such of their own countrymen, belonging to another part of the kingdom, as should have attempted to settle amongst them without being free of their corporation. But in denouncing foreigners they had the national prejudice on their side; and their attempts to confirm and extend their monopolies by their exclusion, were regarded as the noblest efforts of patriotism! Edward III. was fully aware of the real motives by which they were actuated, and steadily resisted their pretensions. But in the reigns of his successors they succeeded better: some of these were feeble and unfortunate, while others enjoyed the crown only by a disputed title, and in defiance of powerful competitors. The support of the great towns was of the utmost consequence to such princes, who, whatever might be their own opinion as to its policy, could hardly venture to resist the solicitations of such powerful bodies to exclude strangers, and to impose restrictions on commerce. From the death of Edward III. to the reign of Elizabeth, the progress made by the country was not inconsiderable, but it was little promoted by legislative enactments. Throughout the whole of this period, the influence of corporations seems to have predominated in all matters relating to trade and the treatment of foreigners; and our legislation partook of the selfish, monopolising character of the source whence it was principally derived. Were the acts and proceedings as to aliens the only extant memorials of our policy from 1377 to 1560, we should certainly seem to have retrograded materially during the interval. Some of these acts were passed with so little consideration, and were so very absurd, that they had to be immediately repealed. Of this sort was the statute of the 8 Henry VI. cap. 24, to the effect, 'That no Englishman shall within this realm sell, or cause to be sold, hereafter, to any merchant alien, any manner of merchandises, but only for ready payment in hand, or else in merchandises for merchandises, to be paid and contented in hand, upon pain of forfeiture of the same.' But as an enactment of this sort was very speedily found to be more injurious to ourselves than to the foreigner, it was repealed in the following sessions.

The more tyrannical their conduct in other respects, the more were our princes disposed to humour the national prejudice against foreigners. If not a cheap, it was, at least, an easy method of acquiring popularity. In the very first parliament after the accession of Richard III., a statute was passed full of the most ridiculous, contradictory, and unfounded allegations as to the injury sustained by the influx of foreigners, and laying them under the most oppressive restraints. Considering, indeed, the sort of treatment to which aliens were then exposed, it may excite surprise that they should have thought of visiting the country; and, in point of fact, it appears that the resort of foreign merchants to our ports was materially impaired by the statutes referred to, and others of the same description. This is evident from the act 19 Henry VII. cap. 6, where it is stated that 'woollen cloth is not sold or uttered as it hath been in divers parts,' and that 'foreign commodities and merchandises are at so dear and exceeding high price, that the buyer cannot live thereon.' But in despite of this authoritative exposition of the mischiefs arising from the restraints on aliens, and on trade, they were both increased in the reign of Henry VIII. And it was not till the reign of Elizabeth that the pretensions of the corporations seem to have been disregarded, and an attempt made to act, not by starts, but consistently, on the policy of Edward III.

The influx of foreigners during the reign of Elizabeth was occasioned chiefly by the persecutions of the Duke of Alva and the Spaniards in the Low Countries. The friends of the reformed religion, which, at the time, was far from being firmly established, and the government, were glad to receive such an accession of strength; and from the superiority of the Flemings in commerce and manufactures, the immigrants contributed materially to the improvement of the arts in England. It would seem, however, that the ministers of Elizabeth contented themselves, perhaps that they might not excite the public prejudice, with declining to enforce the laws against aliens, without taking any very active steps in their favour.

In the reign of James I. the corporation of London renewed with increased earnestness their complaints of aliens. In 1622 a proclamation was issued, evidently written by James himself, in which, under pretence of keeping 'a due temperament' between the interests of the complainants and those of the foreigners, he subjects the latter to fresh disabilities.

Since the revolution more enlarged and liberal views as to the conduct to be followed with respect to aliens have continued to gain ground: several of the restraining statutes have fallen into disuse, while others have been so much modified by the interference of the courts, which have generally been inclined to soften their severity, that their more offensive provisions are become inoperative. Attempts have occasionally been made to pass an act for the general naturalization of foreign protestants, and the policy of such a measure was ably vindicated by Dean Tucker, in two celebrated tracts published in 1751 and 1752*. But no such statute has hitherto been passed, and aliens still continue subject to various disabilities. The principal of these regards the possession of fixed property. It is ruled that lands purchased by an alien for his own use, may be seized by the king. 'If,' says Blackstone, 'he could acquire a permanent property in lands, he must owe an allegiance, equally permanent with that property, to the king of England; which would probably be inconsistent with that which he owes to his own natural liege lord: besides that, thereby the nation might in him be subject to foreign influence, and feel many other inconveniences. Wherefore by the civil law such contracts were made void, but the prince had no such advantage of forfeiture thereby as with us in England.'—(*Commentaries*, Book i. Cap. 10.)

An alien cannot take a benefice without the king's consent, nor can he enjoy a place of trust, or take a grant of lands from the crown. Aliens may, however, acquire property in money, goods, or other personal estate, and may have houses for the purpose of their habitation, and for carrying on their business. They may bring actions as to their personal effects, and may dispose of them by will. The *droit d'aubaine*, (*jus albinatus*, i.e. *alibi natus*), or the right of the crown to succeed to the effects of an alien at his death, so long the custom in France, never obtained in England. If an alien abroad die intestate his whole property here is distributed according to the law of the country where he resided; but such residence must have been stationary, and not occasional, otherwise the foreign municipal regulations will not apply to the property.

The reasons assigned by Mr. Justice Blackstone and others for preventing aliens from acquiring fixed property seem to be very unsatisfactory. In small states there might be grounds, perhaps, for fearing lest the easy admission of aliens to the rights of citizenship should give them an improper bias; but in a country like England, such apprehensions would be quite futile. In this respect the example of Holland seems quite decisive. Notwithstanding the comparatively limited population of that country, it was 'the constant policy of the republic to make Holland a perpetual, safe, and secure asylum for all persecuted and oppressed strangers; no alliance, no treaty, no regard for, nor solicitation of any potentate whatever has at any time been able to weaken or destroy, or make the state recede from protecting, those who have fled to it for their own security and self-preservation*.'

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* Historical Remarks on the late Naturalization Bill, 1751; Queries occasioned by the late Naturalization Bill, 1752.

A short residence in the country, and a small payment to the state, was all that was required in Holland to entitle a foreigner to every privilege enjoyed by a native. It is of importance to remark, that it has not been so much as insinuated that this liberal conduct was in any instance productive of a mischievous result. On the contrary, all the highest authorities consider it as one of the main causes of the extraordinary progress made by the republic in wealth and commerce. It is said in the official paper just quoted, that "Throughout the whole course of all the persecutions and oppressions, that have occurred in other countries, the steady adherence of the republic to this fundamental law has been the cause that many people have not only fled hither for refuge, with their whole stock in ready cash, and their most valuable effects, but have also settled and established many trades, fabrics, manufactures, arts, and sciences, in this country; notwithstanding the first materials for the said fabrics and manufactures were almost wholly wanting in it, and not to be procured but at a great expense from foreign parts †."

With such an example to appeal to, we are warranted in affirming that nothing can be more ridiculous than to suppose that any number of foreigners which it is at all likely should ever come to England, under the most liberal system, could occasion any political inconvenience; and in all other respects their immigration would be advantageous. A general naturalization act would, therefore, as it appears to us, be a wise and politic measure. It might be enacted that those only who had resided three or four years in the country, and given proofs of their peaceable conduct, should be entitled to participate in its advantages.

Chapter X.

Remarks on the Progress of Commerce and Industry in England, from the accession of Edward I. to the death of Elizabeth.

§ 1. *Progress of Commerce and Industry in England from the accession of Edward I. to the accession of Henry VII.*—Dr. Robertson has remarked, that the early progress of commerce in England gave no earnest of the vast extent to which it was destined to arrive. Its growth was at first extremely slow. During the Saxon Heptarchy, England, split into many kingdoms, which were perpetually at variance with each other, exposed to the fierce invasions of the Danes and other northern pirates, and sunk in barbarity and ignorance, was in no condition to cultivate commerce, or to pursue any system of useful and salutary policy. When a better prospect began to open by the union of the kingdom under one monarch, the Norman conquest took place. This occasioned such a sudden and total revolution in the state of property as has hardly been paralleled in any other country. The conqueror divided almost the whole kingdom among his followers; and the disorders incident to the establishment of the feudal system, the oppressive and rapacious conduct of the great barons, many of whom possessed almost regal power, and the enslaved and degraded condition of the mass of the people, prevented all but the rudest and most indispensable species of industry from being attempted.

The great charter, extorted in 1215 by the barons from King John, established, for the first time, principles to which all men could appeal; and which were hostile alike to the violence of the crown and of the nobles. From this period the constitution began to acquire stability; and the English and Normans having gradually coalesced, became, in the thirteenth century, one people. Industry began to revive, and was prosecuted with an energy previously unknown, during the reign of Edward I. Though many of the measures of this able prince were strongly marked with the prevalent prejudices of the time, his administration is, on the whole, entitled to very high praise. 'He considered,' says Hume, 'the great barons both as the immediate rivals of the crown, and the oppressors of the people; and he proposed by an exact distribution of justice, and a rigid execution of the laws, to give at once protection to the superior orders of the state, and to diminish the arbitrary power of the great, on which their dangerous authority was chiefly founded. Making it a rule of his own conduct to observe, except on extraordinary occasions, the privileges secured to them by the great charter, he acquired a right to insist upon their observance of the same charter towards their vassals and superiors; and he made the crown be regarded by all the quality and commonalty of the kingdom, as the great fountain of justice, and the general asylum against oppression. Besides making several excellent statutes, in a Parliament which he summoned at Westminster, he took care to inspect the conduct of all his magistrates and judges, to displace such as were either negligent or corrupt, to provide them with sufficient force for the execution of justice, to root out all bands and confederacies of robbers, and to repress those more silent robberies, which were committed either by the power of the nobles, or under the countenance of public authority. By this rigid administration the face of the kingdom was soon changed; and order and justice took place of violence and oppression.'—(*Hist. of England*, chap. 13.)

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* Proposals for amending the Trade of Holland, printed by Authority. Lond. 1751.

† Ibid. in *loc. cit.*

Previously to the reign of Edward I., there seems to have been no legal process for the recovery of debts due to merchants or traders. But in 1285 (13th Edward I.), a statute was passed for enabling merchants, as well in fairs and markets as in towns and cities, to recover their debts. 'The want of which good regulations, (it is said in the preamble to the act,) has occasioned many merchants to fall into poverty, and also hindered foreign merchants coming into this realm with their merchandise; to the great hurt and damage of merchants and of all the realm.' This act authorizes the summoning of debtors to foreign merchants before the mayors of London, York, and Bristol; a proof that these were considered, at this remote period, the most eminent commercial cities in the kingdom. Indeed, several large towns, now of the first consequence, as Hull, did not then exist, while many others, as Manchester, Leeds, Birmingham, Liverpool, &c., were quite inconsiderable.

The improved state of things, introduced by Edward I. was changed materially for the worse during the reign of his feeble and unfortunate son and successor, Edward II. But it was again restored during the reign of Edward III., which forms an important epoch in our commercial history.

The little commerce carried on by the English, from the conquest to the accession of Edward III., in 1327, was restricted to a few articles. The imports principally consisted of woollen cloths from the Netherlands, wines from France, wood for dyeing, with silks, spices, drugs, and other eastern products imported by the Venetians and Genoese. The principal article of export was wool, which has always formed the staple product of the kingdom; tin, lead, salt, salmon, cheese, &c., and, in plentiful years, corn, were also exported.

However singular it may now appear, the fact is certain, that previously to the conquest, and for more than a century thereafter, slaves formed a considerable article of export from England. When an estate was conveyed from one proprietor to another, all the villains or slaves, annexed to it, were conveyed at the same time, and by the same deed. When any person had more children than he could maintain, or more domestic slaves than he chose to keep, he sold them to a merchant, who disposed of them at home or abroad, as he found most profitable. In a Great Council held at St. Peter's, Westminster, in 1102, a strong law was made against this practice:—'Let no one,' it is said, 'for the future presume to carry on that wicked traffic by which men in England have hitherto been sold like brute animals.' But this law was insufficient to repress the abuse. Ireland seems, in those days, to have been a considerable market for the sale of slaves: and the Irish, in a national synod held at Armagh, in 1171, agreed to emancipate all the English slaves in the kingdom. This measure was not, however, adopted from any sense of the impropriety of retaining fellow-men in a state of bondage, but in order to take away all pretext for the threatened invasion of Henry II.—(See *Henry's Britain*, vol. vi., p. 268, and *Lyttleton's Henry II.*, vol. iii., p. 70, and the authorities there referred to.)

It has been commonly supposed that the woollen manufacture was introduced into England by Edward III. But, though the measures of that monarch tended, as has been shown in the previous chapter, materially to its improvement, it certainly existed amongst us from the time of the Romans. There are notices in the statute book of 'broad cloths, two yards, within the lists,' 107 years previously to the introduction of the Flemish weavers in the reign of Edward III. At this period, however, and for long after, Flanders was the great seat of the woollen manufacture; and the wool of England was principally carried to that country, whence were brought in return, not only woollen cloths, but a large proportion of the foreign products required for our consumption.

The policy with respect to the exportation of wool, in the early ages of our history, was fluctuating and various. Generally speaking, it might be freely exported; but this liberty was sometimes entirely suspended, though, for the most part, the prohibition was only to the extent that no wool should be exported except by licence. This was a device fallen upon for the sake of revenue; and, as may easily be conceived, was often resorted to.

Customs seem to have existed in England before the conquest; but the king's claim to them was first established by the statute 3 Edward I. These duties were, at first, principally laid on wool, wool-felts (sheep-skins), and leather when exported. There were also extraordinary duties paid by aliens, which were denominated *parva costuma*, to distinguish them from the former or *magna costuma*. The duties of tonnage and poundage, of which mention is so frequently made in English history, were custom duties; the first being paid on wine by the ton, and the latter being an *ad valorem* duty of so much a pound on all other merchandise. When these duties were granted to the crown they were denominated *subsidies;* and the duty of poundage having continued for a lengthened period, at the rate of 1*s.* a pound, or five per cent., a subsidy came, in the language of the customs, to denote an *ad valorem* duty of five per cent. A *new subsidy* was an addition of five per cent. to the previous duties. —(*Blackstone's Com.*, Book I. cap. 8.)

For several centuries after the conquest, but particularly after the marriage of Henry II. with Eleanor, heiress of some of the fairest provinces of the south of France, wines formed the principal article of importation into England. In King John's reign, a law was made regulating the prices of the different sorts of wines, and appointing twelve individuals in each city, town, and borough to see its provisions carried into effect. In 1299, 73 vessels arrived in London with cargoes of wine of more than 19 tuns each, exclusive of the ships belonging to the Cinque Ports, which might probably amount to as many more. Froissart states that, in 1372, above 200 sail arrived at Bordeaux from England for wine.

During the first three centuries after the conquest, the merchant vessels belonging to England were comparatively few in number, and were either employed in the coasting trade, or in voyages to the British possessions in France. They were of a small size, rarely exceeding seventy or eighty tons. At this period, the sovereign was master of very few ships of war. Until the sixteenth century, the navy consisted of a sort of marine militia, every sea-port being obliged to furnish its quota of ships and sailors according to its trade and resources. In the fleet under the orders of Edward III. at the siege of Calais, in 1347, there were 738 English ships, carrying 14,956 men, being at the rate of about twenty men to each ship. The pay of the seamen was fourpence a day, or about twelve-pence of our money.

London, Bristol, Norwich, York, Lincoln, Southampton, &c., were, in the fourteenth century, the principal commercial and manufacturing cities in England. But, from their advantageous situation for carrying on an intercourse with the Netherlands and France, Yarmouth and the Cinque Ports seem to have possessed the greatest quantity of shipping. The former sent 43 ships and 1905 men to the siege of Calais, while London only sent 25 ships and 662 men. It is pretty certain, however, that the shipping of Yarmouth, if it equalled that of the metropolis, which is doubtful, did not really exceed it; and it is probable that London had purchased an exemption from the obligation to send ships, by a pecuniary contribution, or in some other way which it is now impossible to discover. (*Anderson*, Anno 1347.)

The peculiar privileges enjoyed by the citizens of the Cinque Ports, and the turbulence of the times, tempted them on several occasions to engage in piratical expeditions, in which they not unfrequently attacked ships belonging to other English ports. They carried this species of outrage to a very great height in 1264.

In a tract published in 1623, (*Circle of Commerce, by E. Misselden*, p. 119), there is a statement, said to be taken from an ancient record in the Exchequer, of the amount and value of the imports and exports in 1354. An abstract of it, given by Anderson, has been often referred to; but the genuine account is as follows:—

EXPORTS.

	£	s.	d.
One and thirty thousand, six hundred, fifty-one sacks and a half of wool, at six pounds value each sack, amount to	189,909	0	0
Three thousand, thirty-six hundred, sixty-five felts, at 40*s*. value, each hundred at six score, amount to . .	6,073	1	8
Whereof the Custom amounts to . .	81,624	1	1
Fourteen last, seventeen dicker, and five hides of leather, after six pounds value the last.	89	5	0
Whereof the Custom amounts to . .	6	17	6
Four thousand, seven hundred, seventy-four cloths and a half, after 40*s*. value the cloth, is	9,549	0	0
Eight thousand, sixty-one pieces and a half of worsted, after 16*s*. 8*d*. value the piece, is .	6,717	18	4
Whereof the Custom amounts to . .	215	13	7
Summa of the out-carried Commodities, in Value and Custom .	294,184	17	2

IMPORTS.

	£	s.	d.
One thousand, eight hundred, thirty-two cloths, after six pounds value the cloth . .	10,992	0	0
Whereof the Custom amounts to . .	91	12	0
Three hundred, ninety-seven quintals and three-quarters of wax, after the value of 40*s*. the hundred or quintal	795	10	0
Whereof the Custom is	19	17	0
One thousand, eight hundred, twenty-nine tons and a half of wine, after 40*s*. value per ton .	3,659	0	0
Whereof the Custom is	182	0	0
Linen cloth, mercery, and grocery wares, and all other manner of merchandise . .	22,943	6	10
Whereof the Custom is	285	18	3
Summa of the in-brought Commodities in Value and Custom, is . .	38,970	13	8
Summa of the surplusage of the out-carried, above the in-brought Commodities, amounteth to . . .	[*] 255,214	13	8

These sums are stated in money of the time, and may, therefore, be about trebled to get their value in money of the present day.

Though treated as authentic by Sir William Temple and others, this account is entitled to very little credit. It is not conceivable that the exports should have amounted to between *seven and eight times the value of the imports!* The account is obviously, indeed, intended only to exhibit the exportation and importation of such commodities as paid duties; and it omits all mention of tin, lead, cheese, and other articles of native produce exported from England. Every one is, however, aware that during the middle ages, and down, indeed, to the reign of James I., custom-house regulations were but little attended to: and the clandestine trade in commodities on which duties were charged, rarely fell short, and frequently much exceeded, that which was legitimately carried on in them.

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[*] The totals do not exactly agree with the items; and there are no means of ascertaining where the error lies.

Owing to the proximity of France and the Low Countries to England, their vessels were doubtless the first that frequented the ports of Britain. The Flemings, however, were more distinguished as a manufacturing than as a maritime people; and the shipping of France was, at this remote period, as it still continues to be, very inferior to that of England. The Hanse Towns in the north, and the Italian republics in the south, engrossed, for several centuries, the principal part of the carrying trade of Europe; and it was in their ships that the greater part of the foreign commodities required for our consumption were imported, and that the most part even of our native produce was exported. The foundations of the Hanseatic League were laid by treaties between Hamburgh, Lubeck, and Bremen in the early part of the thirteenth century. The objects of the association were of the most beneficial kind. It was intended to promote commerce and navigation, and to secure good order and free government, by suppressing piracy at sea and predatory attacks on travellers by land, and by protecting the cities belonging to the League from the tyrannical interference and oppressive exactions of the surrounding nobles and princes. The advantages resulting from the union were so very great, that it was speedily joined by every considerable city in the north of Europe; and became so very powerful that its alliance was courted and its enmity dreaded by the greatest monarchs. Bruges, in the Netherlands, was the entrepôt to which the Venetians, Genoese, and other Italians, brought the silks, velvets, spices, drugs, fruits, and other products of the south, and exchanged them for the ruder and more bulky, but not less useful products of the north, as iron, tin, fish, flax, pitch, &c. The Hanseatic merchants carried the Italian commodities to the Baltic, and up the great rivers into the interior of Germany. A taste for improved accommodations was thus diffused amongst those whose barbarism had ever remained impervious to the Roman power, and a powerful stimulus every where given to industry.

The Netherlands probably owed their selection as the grand emporium of the southern and northern divisions of Europe, as much to the liberality of their government, and the freedom of their institutions, as to their central situation. The good order established amongst them at a period when the rest of Europe was a prey to feudal anarchy seems to have been the real cause of the early superiority of the Flemings in the arts of civilized life. A circumstance occurred in the reign of Edward II., which sets the liberal policy of the Flemish sovereigns, and their enlarged notions as to trade, in the most striking point of view. Edward, in a letter addressed to Robert Earl of Flanders, states that he had learned that an active intercourse was carried on between the Scotch and the Flemings; and as the Scotch had taken part with Robert Bruce, who was in rebellion against him, and excommunicated by the Pope, he begged that the Earl would put a stop to this intercourse, and exclude the Scotch from his dominions. The Earl returned an answer full of expressions of respect for Edward, adding, however,—'We must not conceal it from your Majesty, that our country of Flanders is common to all the world, where every person finds a free admission. Nor can we take away this privilege from persons concerned in commerce, without bringing ruin and destruction upon our country. If the Scotch go to our ports, and our subjects go to theirs, it is neither the intention of ourselves nor our subjects to encourage them in their error, but only to carry on our traffic without taking any part with them.'—(*Rymer's Fœdera*, vol. iii., p. 771.)

A factory belonging to the Hanseatic merchants was early established in London. It was situated in Thames Street, on a spot of ground called the *Steel Yard*, which became the common appellation for the Hanseatic or German merchants in England. The members of this factory acquired very considerable privileges *. They were permitted to govern themselves by their own laws and regulations; the custody of one of the city gates (Bishopsgate) was committed to their care; they were exempted from contributing to subsidies, tenths, and fifteenths, and were not subjected to the additional duties imposed from time to time on goods imported and exported; paying only the ancient customs agreed upon at the time of their establishment, which were very small. These privileges could not fail to excite the ill-will and animosity of the English. The Hanse merchants were every now and then accused of acting with bad faith; of introducing commodities as their own which were really the produce of others, that they might evade the duties with which they ought to have been charged; of capriciously extending the list of towns belonging to the association; and of obstructing the commerce of the English in the Baltic. Efforts were continually making to bring these disputes to a termination; but as they grew out of the privileges granted to and claimed by the Hanse merchants, this was found to be impossible, so long as these were preserved. The Hanse merchants contrived to engross the principal part of the foreign trade of England till the reign of Henry VII.; and they were not entirely stripped of their peculiar privileges till 1597.

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* These were confirmed to them by charter of Henry III. in 1269; but it is pretty certain that they had been conceded long before.

Next to the Germans and Flemings the Italians were the most numerous class of foreigners in England, in the interval between the beginning of the thirteenth and the close of the fifteenth centuries. They were commonly known by the name of Lombards; and were principally engaged in pecuniary transactions, being at the time the bankers and money-brokers of Europe. They were also the great importers of spices, drugs, silks, and other eastern products. But, notwithstanding the advantages that must have resulted from their residence amongst us, they were at all times exceedingly unpopular. To such an excess was the prejudice against them carried, that in 1283 the Commons granted the fiftieth part of their moveable property to Edward I. on condition of his expelling the Italians from the kingdom. They were, however, soon after recalled; although, notwithstanding the protection of the king, they were exposed to many vexatious annoyances.

In 1316, Edward II. endeavoured to dissuade the Genoese, as he had done the Earl of Flanders, from maintaining any intercourse with the Scotch. On this occasion he reminded them that a very ancient and friendly intercourse had subsisted between their states and his ancestors, kings of England, and their subjects. (*Anderson,* Anno 1316.) The trade carried on with the Venetians seems, however, to have been more considerable than that with the Genoese In 1323, a quarrel happened between the crews of five Venetian ships lying at Southampton, and the townspeople. in which several lives were lost. The king fearing that this might deter the Venetians from continuing their trade to England, granted a free pardon to all concerned in the affair, promising, at the same time, the most perfect security and friendly treatment to all Venetian merchants and mariners who should come to England. In 1325, a treaty, which will be afterwards noticed, was concluded with the Venetians. The trade with Italy, at this early period, and for long after, was carried on exclusively in Italian ships*. It was not, in fact, till the reign of Richard III., that the English merchants appear to have resorted in any considerable numbers, or to have obtained any solid footing in Italy. This is evident from the commission given by that prince, in 1485, to Laurentio Strozzi to be English consul at Pisa:—'Whereas certain merchants and others from England intend to frequent foreign parts, and chiefly Italy, with their ships and merchandise, and we being willing to consult their peace and advantage as much as possible, and observing, from the practice of other nations, the necessity of their having a peculiar magistrate among them for the determining of all disputes, &c.' Strozzi was allowed a commission of one-fourth per cent. on all goods belonging to Englishmen imported into or exported from Pisa.

The necessities of the monarchs, and the difficulty, already alluded to, of enforcing payment of duties on imports and exports in the middle ages, seem to have given rise to the regulations as to the *Staple,* so famous in the commercial history of this period. The merchants of the Staple consisted of a company formed about the beginning of the fourteenth century. It was established to serve a double purpose; viz., first, to purchase and collect all that could be spared for exportation, of wool, woolfelts, leather, lead, and tin, which were denominated the staple products of the kingdom; to convey these to the staple towns, or to the towns whence only they could be exported, so that the collection of the customs might be facilitated, and that foreign merchants might know where to find stocks of the commodities referred to: and second, to export these commodities to foreign countries, and to bring back returns in goods, coin, or bullion. Natives and foreigners were indiscriminately employed in the purchase and collection of staple commodities in the kingdom; but, by a regulation of which it is difficult to discover the motive, no native of England, Ireland, or Wales, was permitted to engage, either directly or indirectly, in the exportation of any staple commodity. The staple towns for England were Newcastle, York, Lincoln, Norwich, Westminster, Canterbury, Chichester, Winchester, Exeter, Bristol, and Caermarthen; those for Ireland were Dublin, Waterford, Cork, and Drogheda.

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* Anderson, Anno 1323; Henry's Britain, vol. viii., p. 322.

Staple commodities could only be exported to certain foreign towns, that consequently received the name of foreign staples. The staple for the Low Countries was, for a lengthened period, established at Bruges; but after the conquest of Calais by Edward III., it was transferred to the latter.

Merchants of the staple were exempted from the jurisdiction of the ordinary magistrates, being subjected only to the authority of a mayor and constables of the staple, chosen annually in each of these towns, who were to judge in all disputes by the merchant law, and not by the common law. A certain number of *correctors* were chosen in each staple town, whose office it was to register all bargains, for which they received a small fee from the parties. There were also six auditors—two Germans, two Lombards, and two Englishmen—in each staple town, who were to determine all disputes referred to them, in the presence of the mayor and constables. Many privileges and immunities were conferred on this famous company, which proved a sort of subordinate commonwealth; and it was made felony to attempt to deprive it of any of its privileges.—(See Statutes of 27th Edward III. caps, 6, 8, 21, 22, 24, and 25.)

It is needless to dwell on the obvious inexpediency of such regulations, But, owing probably to the facility with which most of them were evaded, they do not seem to have been so injurious as we might now be disposed to conclude. In 1458 the merchants of the staple paid 68,000*l.* (money of the times) duty on the commodities they exported; a fact which shows that their trade was very considerable.

The measures of Edward III. for the improvement of the woollen manufacture, and the privileges he conferred on towns, contributed to raise up a class of free labourers. But though there were differences in their condition, there is abundant evidence to prove that at this period the mass of the people residing in the country were in the most miserable state of servitude. The great pestilence that raged in England in 1349, is supposed to have cut off a half, or more, of the inhabitants. The services of those that survived having in consequence become more valuable, they demanded and received higher wages. This rise was, however, regarded as a grievous hardship: and the king, with the advice of 'his prelates, nobles, and learned men,' issued an edict, by which all labourers were, under severe penalties, ordered to work at their old occupation for the same wages as they received before the pestilence! But 'the servants having no regard to the said ordinance, but to their ease and singular covetise,' refused to serve unless for higher wages than it allowed. In consequence of this resistance, the famous statute of the 21st Edward III. c. 1, commonly called the statute of labourers, was passed. It enacts that every able-bodied person under sixty years of age, not having sufficient to live on, being required, shall be bound to serve him that doth require him, or else shall be committed to gaol till he finds surety to serve. If a servant or workman depart from service before the time agreed on, he shall be imprisoned; and if any artificer take more wages than were wont to be paid, he shall be committed to gaol. But the increase of wages having originated in natural causes, could not be checked by such enactments. Their inefficacy did not, however, lead to the adoption of a policy more consistent with justice or common sense. On the contrary, fresh efforts were made to give effect to the statute of labourers; and to prevent its being defeated by the peasantry taking refuge in towns, or emigrating to a distant part of the country, it was enacted by the 34th Edward III., that if any labourer or servant flee to any town, the chief officer shall deliver him up; and if they depart from another country, they shall be burned in the forehead with the letter F!

The injustice done to the labourers by these oppressive statutes was the more glaring, as Edward, to obtain funds to prosecute his schemes of conquest in France, had had recourse to the disgraceful expedient of enfeebling the standard of the coin. Not only, therefore, did the regulations as to wages, so far at least as they were effectual, deprive the common people of that increased payment to which they were entitled from the diminution of their numbers, but they also hindered them from being compensated for the fraud practised on the coin. It was attempted, indeed, to obviate the effects of the diminution of the latter by fixing the prices of most articles; but this was only to bolster up one absurdity by another, and it is not possible that such limitations could have any material influence.

Notwithstanding the degradation and ignorance of the mass of the people, the oppressions to which they were subjected made them at length rise *en masse* against their oppressors. So long indeed as Edward III. lived, the public tranquillity was preserved, and the villains and labourers submitted to the injustice of which they were the victims. But the increase of towns and manufactures during the lengthened reign of this monarch having materially increased the number of free labourers, a new spirit began to actuate the peasantry, who, contrasting their servile condition with the condition of the citizens, became sensible of their inferiority, and more alive to the oppressions they suffered. An attempt to enforce the provisions of the statute of labourers, in the reign of Richard II., was the ground-work of the famous rebellion headed by Wat Tyler. The demands made by the peasantry show the grievances under which they laboured. They required the abolition of slavery, freedom of commerce in market towns without tolls or imposts, and a fixed rent on lands, instead of the services due by villanage. The rebellion, after having attained to a formidable magnitude, was suppressed with much bloodshed. But though reestablished, the servitude of the peasantry was relaxed, and the class of free labourers became gradually more numerous.

On the whole, the domestic policy of Edward III. was favourable to the progress of commerce and the arts, and to the advancement of society. The efficient protection he afforded to alien merchants and manufacturers does honour to his sagacity, and was undoubtedly productive of the best effects. He endeavoured not only to render his dominions the resort of foreigners, but to establish a perfect freedom of trade. In a statute passed in 1350, confirming one that had previously been passed to the same effect, it is enacted that 'all persons, as well foreigners as natives, may buy and sell by wholesale and retail, when, where, and how they please, paying the several duties and customs, *notwithstanding any franchises, grants, or usages to the contrary; seeing such usages and franchises are to the common prejudice of the king and people.*' The judicious observations of Mr. Anderson on this statute deserve to be quoted:—'Had this excellently well-judged act been suffered to remain in force, and to operate to this hour, the nation would, very probably, have increased much faster in people and wealth. But the monopolizing grants of subsequent times from the crown, which, by long use, came to be looked on as *legal*, though not confirmed by act of parliament; and the city of London and other cities and towns having also had weight enough to obtain certain laws for curtailing and frustrating the privileges allowed to *all*, by this act, and for confining the said privileges solely to the freemen of their corporations, gradually brought things to the monopolizing state in which we see them at present in all our corporate towns. Although every person of discernment, in this age, sees and laments an evil not so easily to be remedied, by reason of so many estates bequeathed to and settled in possession of the said monopolizing societies.'—(*Historical and Chronological Deduction*, &c. vol. i. p. 181.)

Edward III., though more powerful and vigilant than any of his predecessors, was unable to repress the disorders that grew out of the state of society in which he lived. The barons, by their confederacies with each other, braved the authority of the crown; while, by protecting their dependents in every excess, the laws were rendered inoperative. Innumerable complaints were made by the Commons of the murders, rapes, robberies, and other outrages, by which every part of the country was disgraced and afflicted. But they admitted of no effectual remedy; the nuisance continued unabated, till the increasing power of the crown and the towns subverted the feudal system, and secured the ascendancy of the court.

The most objectionable, perhaps, of all the measures of Edward III. was his enfeebling the standard of the currency, which at that time consisted wholly of silver. The necessities in which he was involved, by his wars with France, drove him to this ruinous expedient. It must, however, be admitted that the subject was then but little understood; and that those who degraded the currency in the middle ages, were innocent, compared with those who have perpetrated similar frauds after the importance of preserving the standard inviolate had been fully demonstrated.

Besides the merchants of the Steel Yard and of the Staple, a famous mercantile association was early founded in London, at first under the title of the Brotherhood of St. Thomas Becket, and afterwards under that of the *Merchant Adventurers*. It consisted entirely of Englishmen; and originally any one who desired it might become a member, and participate in all its privileges, on payment of a moderate fine. It appears to have been the intention of government, that the foreign trade of the country should be divided between this society and the merchants of the Steel Yard. A violent jealousy consequently grew up between these associations, and their conflicting rights and claims led to perpetual disputes, that continued till the dissolution of the Hanseatic factory.

But whatever benefits might otherwise have been derived from the vigorous and generally equitable government of Edward III., were countervailed by the obstinacy with which this able prince and his immediate successors urged their pretensions to the throne of France. The nation engaged with the greatest ardour in the support of this unfounded claim; and continued, for a lengthened period, to waste its energies and exhaust its resources in efforts to conquer that kingdom.

The mutual and cruel ravages of the French and English, during this lengthened and sanguinary struggle, are said to have been such, that in extensive districts of Normandy and other French provinces, neither man nor woman was to be seen, except in the fortified towns. The description given by Speed, after Polydore Virgil, of the barbarous warfare then carried on in France, is not, in any respect, overcharged:—'While the English and French contend for dominion, soveraignty, and life itselfe, men's goods in France were violently taken by the licence of warre, churches spoiled, men every where murthered or wounded, others put to death or tortured; matrons ravished, maydes forcibly drawn out of their parents armes to be deflowered, townes daily taken, daily spoiled, daily defaced, the richest of the inhabitants carried whether the conquerors thinke good; houses and villages round about set on fire: no kind of cruelty is left unpractised upon the miserable French. Neither was England herself void of those mischiefes, who every day heard the newes of her valiant children's funerals, slaine in perpetual skirmishes and bickerings, her general wealth continually ebd, and wained, so that the evils seemed almost equall, and the whole westerne world echoed the groans and sighs of either nation's quarrels, being the common argument of speech and compassion throughout Christendom.'—(p. 668.)

The statement in this striking paragraph, as to the injury sustained by England in this sanguinary contest, is corroborated by other evidence. The draughts of men and money required for the reinforcement and maintenance of the armies in France, and the licence given to all sorts of disorders at home, by the absence of the sovereign, could not fail of having a most mischievous influence. A statute of the 9th of Henry V. recites, 'That whereas at the making of the act of the 14th of Edward III. (1340,) there were sufficient of proper men in each county to execute every office; but that, *owing to pestilence and wars*, there are not now (1421) a sufficiency of responsible persons to act as sheriffs, coroners, and escheators.' The laurels, as Mr. Barrington has justly observed, which were gained by Henry V., are well known; but it is not so well known that he has left us, in the above statute, irrefragable proof that they were not obtained but at the dearest price,—the impoverishment and depopulation of the country.

The success of the French arms during the minority of Henry VI. at length put a period to this fatal phrenzy. Unfortunately, however, the tranquillity enjoyed by the English subsequently to their expulsion from France was but of short duration. England soon after became the theatre of civil war. The parties attached to the interests of the rival houses of York and Lancaster were pretty equally balanced, and for nearly *forty* years, with a few short intervals *only* excepted, one half the nation may be said to have turned its arms against the other. The insecurity of property, and the rapine and bloodshed inseparable from a civil war, which raged with more than ordinary fury, proved exceedingly unfavourable to the growth of industry and commerce. So feeble was the naval power of England in the reign of Edward IV., that that monarch was glad, after being defeated in several engagements, to conclude a treaty, in 1474, on very disadvantageous terms, with the Hanse Towns*.

It is difficult to form any very accurate conclusions as to the state of mercantile shipping from the reign of Edward III. to that of Henry VII.; but the increase, if there was any, seems to have been very inconsiderable. During the whole of this period, most foreign commodities consumed in England, with the exception of wine, were imported in foreign bottoms. In 1381, an act was passed—in consequence, as appears from the preamble, of the complaints of the Commons of the decay of shipping—prohibiting all English merchants from freighting foreign ships, under forfeiture of the goods embarked in them. But it was very soon found that this act could not be enforced without great injury to trade; and in the following year a statute was passed which, in effect, suspended the former, by authorizing the employment of foreign vessels when English ones could not be procured.

A famous merchant of Bristol, of the name of Canynge, who was five times mayor of that city, is said to have been the greatest English ship-owner of the reign of Edward IV. The prevalent opinion seems to be that he had in his employment ships of 900, 500, and 400 tons burden*. The only authority for this statement is an inscription on Canynge's tomb, at Bristol, where it is stated, that 'having *forfeited the king's peace,* he was condemned to pay 3000 marks, in lieu of which sum King Edward IV. took of him 2470 tons of shipping, among which was one ship of 900 tons burden, another of 500 tons, and one of 400 tons, the rest being smaller.' (*Anderson*, anno 1449.) Mr. Anderson conjectures, apparently with much probability, that the 'forfeiture of the king's peace,' alluded to in this inscription, refers to some act of piracy, or to some abuse of letters of marque, committed by Canynge. At all events, it is sufficiently certain that no merchant ships of the burden of 900, or even 500 tons, were built in England for more than a century after this period; so that if the statement as to the tonnage may be depended on, the fair presumption is, that the vessels had been taken from the Venetians or Genoese. The circumstance of the forfeiture of the ships being recorded on Canynge's tomb does not, as Mr. Macpherson seems to suppose, prove that they were not acquired by piracy. This offense was estimated very differently in those days and at present; and there might have been colourable grounds for the capture.

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* This treaty being the most important of any entered into between England and the Hanse Towns, we subjoin an abstract of its principal conditions.

1. All past injuries and complaints shall be buried in oblivion, and all injuries and violences shall be absolutely forborne for the future.

2. For the greater safety of the merchants and people of the Hanse Society, King Edward agrees to grant his charter or obligation in the strongest terms, and shall also get it confirmed by act of parliament, that no kind of damage shall be done to their persons or goods, *by reason of any sentence or determination of the said king and his council,* for reprisals, &c. on account of matters done prior to this treaty.

3. The merchants of England may freely resort and trade to the countries of the Hanse League, as the Hanseatic merchants may to England, with their ships and merchandise, freely to sell the same and purchase others there, without paying in either country any more than the ancient duties and customs, on any pretence whatever.

4. All the privileges and immunities of the Hanseatics in England are hereby renewed, and shall also be confirmed by act of parliament; and the English shall enjoy all their immunities at the Hanse Towns as formerly.

5. The Hanseatic merchants in England shall not henceforth be subject to the lord high admiral's court of jurisdiction; but in controversies about maritime affairs, &c. shall have two judges allotted to them by the king for determining the same.

6. That the steel-yard in London, in its utmost extent, shall be confirmed to the said German merchants, as also the steel-yard at Boston; and that a like house be assigned for their use at Lynn, near the water side.

7. That £10,000 sterling, liquidated to be due by the king to the said German Hanse merchants, shall be paid or deducted out of the customs and duties on their merchandise, till the whole sum be discharged.

8. If any city of the Hanseatics shall hereafter separate itself from the general union, the king of England shall cause all the privileges of that separating city to cease in England until they be re-united to the league.

9. The said German merchants of the steel-yard shall have the possessing and keeping of the gate of the city of London called Bishopsgate, as by ancient agreement between that city and them.

10. The king shall provide that the woollen cloth of England be reformed, both as to the quality of the wool, and the length and breadth of the cloth.

11. The said steel-yard merchants shall be at liberty to sell their Rhenish by retail as well as wholesale, according to ancient custom.

* Hallam's Middle Ages, vol. iii. p. 386, octavo edition.

The truth is, that the navigation of England continued throughout this whole period very limited. 'While,' says Dr. Robertson, 'the trading vessels of Italy, and Spain, and Portugal, as well as those of the Hanse Towns, visited the most remote parts of Europe, and carried on an active intercourse with its various nations, the English did little more than creep along their own coasts in small barks, which conveyed the productions of one county to another. The cross of St. George was seldom displayed beyond the precincts of the narrow seas. Hardly any English ship traded with Spain and Portugal before the beginning of the fifteenth century; and half a century more elapsed before the English mariners became so adventurous as to enter the Mediterranean.' —(*America*, book 9th.)

A rhyming tract, printed by Hakluyt, (vol. i. p. 187,) entitled the '*Process of English Policy*,' appears to have been written about the middle of the fifteenth century. Its object is to inculcate the policy of *keeping the sea*; that is, of having the absolute command of the Channel, and particularly of the straits of Dover. The writer then enumerates the different products of such European nations, with the exception of France, as had any over-sea traffic. His statements on this head, which are very curious, have been condensed by Mr. Macpherson nearly as follows:—

The exports of Spain consisted of figs, raisins, bastard wine, dates, liquorice, Seville oil, grain, Castile soap, wax, iron, wool, wadmole, skins of goats and kids, saffron and quicksilver, which was all shipped for Bruges, the great Flemish emporium; of these wool was the chief article. In return the Spaniards received fine cloth of Ypres, which is noted as superior to that of England, cloth of Curtrike (Courtray), fustian and linen[*]. The Flemings could not make good cloth of the Spanish wool by itself, and were obliged to mix it with the English, which (according to the author) was the chief support of their manufacture, as without it they could not possibly carry it on, or support their numerous population, their country not producing food sufficient for their support for one month in the year. (This is doubtless a great exaggeration.)

With Portugal the English maintained a considerable intercourse, and were in the habit of making voyages to it. The commodities were wine, osay, wax, grain, figs, raisins, honey, cordovan, dates, salt, hides, &c.

Bretagne exported salt, wine, crest cloth, and canvass. The Bretons, especially those of St. Malo, are described as much addicted to piracy, and as caring very little for their duke. The writer states that they often plundered the east coasts of England, and levied contributions, or ransoms, from the towns.

The exports of Scotland consisted of wool, wool-felts, and hides. The Scotch wool, mixed with English, was made into cloth at Popering and Bell, manufacturing towns in Flanders. The Scotch vessels carried home from Flanders mercery, haberdashery ware, and 'cart wheels and barrows.'

The exports of Prussia were beer, bacon, osmunds, copper, steel, bow staves, wax, peltry, pitch, tar, boards, flax, thread of Cologne, fustian, canvass, cards, buckram, and also silver purchased from Bohemia and Hungary. The returns from Flanders were woollen cloths of all colours. And many of the Prussians are described as sailing to the Bay of Biscay for salt,

The Genoese in great carracks imported into England cloth of gold, silk, black pepper, wood in great plenty, wool, oil, wood ashes, cotton, roche alum, and gold for paying their balances. They took in return wool and woollen cloths of all colours, which they sometimes carried to Bruges, the chief staple of their trade.

The Venetians and Florentines imported into England, in large galleys, all kinds of spiceries and groceries, sweet wines, sugar, apes and other foreign animals, and many trifling articles of luxury. In return they received wool, cloth, and tin. The balance was supposed to be in their favour; for the author is much displeased that

> 'Thei bere the gold out of this lond
> And sowketh the thrifte out of our hond
> As the waspe sowketh hony of the be.'

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[*] It is necessary to remember that Spain, at this time, contained several kingdoms often at war among themselves. The trade here described is apparently that of Castile. Catalonia possessed flourishing manufactures of wool, cotton, linen, silk, &c.

The Venetians were also dealers in exchange and lent money at interest. They also used to travel to Cotswold and other parts of England to buy up wool, cloth, tin, &c. The author regrets that they were not compelled to unload in forty days, and to load in other forty, nor obliged to act under a host or landlord broker as formerly, and as the English at Venice were obliged to do.

In the marts or fairs of Brabant, the English (and probably other foreigners also) were obliged to sell their cloths, &c., in fourteen days, and make the purchases, consisting chiefly of mercery, haberdashery, and groceries, in as many more, on pain of forfeiture. Those fairs were frequented by the English, French, Dutch (or Germans), Lombards, Genoese, Catalonians, Spaniards, Scotch and Irish. The author affirms that the English bought more in the marts of Brabant, Flanders, and Zealand, than *all* other nations.

Brabant and Zealand exported madder, wood, garlic, onions and salt fish. The Hollanders bought the English wool and wool-felts at Calais. In the marts of Brabant were also sold the merchandise of Hainault, France, Burgundy, Cologne, and Cambray, which were brought in carts over land.

The exports of Ireland were hides, wool, salmon, hake, herrings, linen falding, and the skins of martens, harts, otters, squirrels, hares, rabbits, sheep, lambs, foxes and kids. Some gold ore had lately been brought from Ireland to London. The abundant fertility and excellent harbours of Ireland are noted by the author, who laments that the island was not made more profitable to England by a complete conquest.

The trade to Iceland for stock fish, hitherto, according to the author, almost confined to Scarborough, had, for about twelve years past, been taken up in Bristol and other ports. It is said to have been over done, and that the vessels engaged in it could not obtain full freights.

Some faint traces of the negotiation of bills of exchange have been discovered, or supposed to be discovered, in antiquity. We believe, however, that we are really indebted to the Jews and Italians of the middle ages for the discovery of this admirable expedient for adjusting the claims of individuals resident at a distance from each other. According to Mr. Macpherson (*Annals of Commerce*, vol. i. p. 405), the first mention of bills of exchange, in connexion with the history of England, occurs in 1255. The Pope having quarrelled with Manfred, King of Sicily, agreed, on Henry III. engaging to defray the expense, to depose Manfred and raise his second son Edmund to the Sicilian throne. The enterprise misgave; but the merchants of Sienna and Florence, who advanced the money to carry it into effect, were repaid by bills of exchange, drawn on the *prelates* of England; who, though they protested they knew nothing at all about the transaction, were nevertheless compelled, under pain of excommunication, to pay the bills and interest.

Capmany (*Comercio Antiguo de Barcelona*, tomo i., p. 212) has given a copy of an ordinance of the magistracy of Barcelona, issued in 1394, enacting that bills should be accepted within twenty-four hours of their presentation; a sufficient proof that they were then in general use. Bills, however, were rarely either seen or negotiated in England previously to the middle of the fifteenth century.

The value of land during the civil wars seems to have been about *ten* years' purchase. This may be fairly inferred from proclamations issued in 1470 by Edward IV., and in 1483 by Richard III., offering in both instances a reward of 1000*l.* in money, or 100*l.* a year in land, to any one who should arrest the individuals named in the proclamations. This sufficiently evinces the insecurity of property in these barbarous times.—(*Rymer's Fœdera*, vol. xi., p. 654, &c.)

The fisheries seem to have been early the object of legislative arrangements. In the reign of Edward IV., various statutes were enacted, prescribing rules for the packing of salmon, herrings, eels, &c.; and there are several older statutes for the preservation of the fry of salmon, lampreys, &c.—(*Anderson*, Anno 1483.)

Even though the situation of the country in other respects had been favourable to foreign commerce, the state of society previously to the reign of Henry VII. was such as to hinder it from making any material progress. Except in a few large towns, there was no such thing as a middle class. The great mass of the people was held in thraldom by the nobility; and the laws enacted in the reign of Edward III. show the obstacles opposed to their improvement and emancipation. Such persons were compelled to satisfy themselves with mere necessaries. And the revenues of the great lords being exhausted in maintaining crowds of dependents, and in a rude sort of hospitality, the demand for foreign commodities was confined within very narrow limits. The clergy, indeed, and the monks belonging to the richer monasteries, introduced a more refined mode of living; at the same time that the villains on their estates were less oppressed than on those of the nobles. Most part, however, of the increase that really took place in the trade of the country between the death of Edward III. and the accession of Henry VII. is ascribable to the growth of the towns in the interim, which, though far from rapid, was not so inconsiderable as is sometimes stated. The charters of enfranchisement given to these communities, the privilege which they early acquired of electing their own magistrates and regulating their municipal government, and the police and good order they established, gave them great advantages, and rendered their inhabitants immeasurably superior, in point of wealth and civilization, to those of country districts. By an edict of William the Conqueror, such villeins as fled to a town and were not reclaimed by their masters within a year and a day, acquired their freedom: and even of those that fled to the towns and were reclaimed, few comparatively were given up. So early as the reign of Edward I. the influence of the towns began to be very sensibly felt; and it became still more decided after that of Richard II. In every country the towns have been the cradles of civilization, and of public liberty; but in England this has been most strikingly the case. Having been early admitted into parliament, their representatives speedily acquired a considerable influence, which continued to increase with the increasing numbers, intelligence, and wealth of their constituents. This circumstance, more than any thing else, prevented the establishment of arbitrary power in England. The destruction of the feudal privileges of the aristocracy by the house of Tudor was accomplished with comparatively little difficulty; but when the Stuarts attempted to act by the commons as the Tudors acted by the nobles, they found the wide difference between attacking oppressive privileges engrossed by a class, and rights enjoyed by a whole people.

But notwithstanding the vast advantages that have resulted from the growth of towns and cities, they have not been altogether without alloy. The citizens engaged in particular trades were early joined into corporate bodies, which immediately began to discover that rapacious, short-sighted, monopolizing spirit by which corporations have always been distinguished. Instead of endeavouring to promote their interests by an hospitable reception of strangers from other parts of the country, and of foreigners, they exerted themselves to exclude both the one and the other from participating in the advantages they enjoyed.

The regulations as to apprentices originated in the efforts made by the corporate bodies to exclude competitors. They were intended to prevent the exercise of any trade in any town corporate, except by those who had served an apprenticeship of a certain specified duration. The by-laws of the different corporations to this effect were confirmed by the celebrated statute of the 5th of Elizabeth (1563), commonly called the statute of apprenticeship, which fixed the duration of such engagements at *seven* years, and extended the regulation to all the corporate towns in the empire. And what is most extraordinary, this statute, though interfering so directly with the freedom of industry, and intended to bolster up the most oppressive monopolies, preserved its place on the statute book till 1814.

But in the early part of our history, the landlords were disposed, even more than the corporate bodies, to increase the difficulties of apprenticeship. The advantages enjoyed by mechanics resident in towns over country labourers, were so very great, that the latter were anxious, under any conditions, to bind their children apprentices. To counteract this practice the great lords fell upon several devices; and in the reign of Henry IV. an act was passed prohibiting all persons from binding their sons and daughters by an apprenticeship, unless they possessed twenty shillings a year in land! The decay of husbandry was pleaded as a justification of this and similar enactments; but their real intention was to prevent the emancipation of the peasantry, the lords being unwilling to lose the services to which they were bound, or to resign the jurisdiction they were accustomed to exercise over them. When, however, money payments began, after the accession of the House of Tudor, to be preferred to services, the landlords not only ceased to oppose, but encouraged the emigration of the peasantry to the towns; and their increasing influx, by exciting the fears of the corporate bodies, seems to have given birth to the statute of apprenticeship referred to above.

Down to the reign of Henry VII. the commerce of England, in common with that of most other countries, suffered severely from piratical depredations. Even those esteemed as good citizens, and engaged in trade as a pursuit, were so much under the influence of the predatory spirit of the times, that they did not hesitate to engage in marauding adventures. The mischief was aggravated by the practice, then very prevalent, of granting letters of marque to private individuals, authorizing them to make reprisals on the subjects of states with which the princes, by whom the letters were granted, were at peace! Such licences to carry on private wars necessarily led to every sort of abuse, and increased, in no ordinary degree, the dangers of navigation. The suppression of piracy was, indeed, the principal object contemplated by the founders of the Hanseatic League; but notwithstanding the efforts of that powerful association, the offence continued to be very prevalent till the end of the fifteenth century. At length, however, the establishment of good order, and the prevalence of sounder views of national interest, occasioned the suppression of piracy, and of the practices which had given countenance to it. Letters of marque were no longer granted except when states were at war; and pirates, being every where treated as robbers, were finally banished from the European seas.

Besides the dangers which mariners encountered in those barbarous ages from the attacks of pirates, they were exposed to the most cruel treatment in the event of their being wrecked. After the subversion of the Roman power it was customary in most countries to reduce the survivors to slavery, and to confiscate their property for the use of the king or of the lord of the manor! But such disgraceful proceedings could only be tolerated in the very darkest ages. In England it was adjudged, so early as the reign of Henry I., that if any person escaped alive out of a ship it should be no wreck. And after various modifications it was decided in the reign of Henry III., that if goods were cast on shore, having any marks by which they could be identified, they were to revert to the owners, if claimed any time within a year and a day. The statute 27 Edward III., cap. 13, enacted, that if a ship were lost and the goods came to land, they were to be delivered to the merchants, paying only a reasonable reward or salvage to those by whom they were saved or preserved. But these ancient statutes, owing to the disorders of the times, were but feebly enforced; and the disgraceful practices alluded to did not entirely disappear till a comparatively recent period.

In all countries, however barbarous, that have any shipping or foreign trade, we meet with some system of maritime law. The Romans borrowed their regulations as to naval affairs from the Rhodians; the justice and equity of whose code were celebrated by the best ancient writers, and are demonstrated by the fragments that are still extant. A code of maritime law, entitled the '*Consolato del Mare*,' founded principally on the basis of the Roman law, but interspersed with rules and regulations of a later origin, appears to have been issued at Barcelona somewhere about the end of the thirteenth or the beginning of the fourteenth century, and speedily obtained great authority among the nations bordering on the Mediterranean. The collection of sea laws, entitled the '*Roole des Jugements d'Oleron*,' was the first body of maritime jurisprudence that appears to have acquired any influence in England, where it has long been held in the highest esteem. There is much diversity of opinion as to the origin of this code. The prevailing opinion in Great Britain has been that the '*Jugements d'Oleron*' were compiled by direction of Queen Eleanor, the wife of Henry II., in her quality of Duchess of Guienne; and that they were afterwards enlarged and improved by her son, Richard I., at his return from the Holy Land; but this statement is now admitted to be destitute of any good foundation. The most probable theory seems to be, that they are a collection of the rules or practices followed at the principal French ports on the Atlantic, as Bordeaux, Rochelle, St. Malo, &c. They contain, indeed, rules, the observance of which is essential to all maritime transactions, wherever they may be carried on; but the references in the code sufficiently prove that it is of French origin. The circumstance of our monarchs having large possessions in France, when the rules of Oleron were collected and reduced into a system, naturally facilitated their introduction into England, and made them be regarded with peculiar favour. 'I call them the laws of Oleron,' said Sir Leoline Jenkins, 'not but that they are peculiarly enough English, being long since incorporated into the customs and statutes of our Admiralties; but the equity of them is so great, and the use and reason of them so general, that they are known and received all the world over by that, rather than by any other name.' Molloy, however, has more correctly, perhaps, said of the laws of Oleron, that 'they never obtained any other or greater force than those of Rhodes formerly did; that is, they were esteemed for the reason and equity found in them, and were applied to the case emergent.' —(M'Culloch's *Com. Dict.* Art. MARITIME LAW.)

Previously to the struggle between the houses of York and Lancaster, acts had occasionally been passed restraining the importation of certain species of foreign produce, particularly of woollen manufactures. But these were, for the most part, soon after repealed; and it is probable, from the inefficiency of custom-house regulations at the time, had but very little influence. They seem principally to have been passed at the solicitation of the incorporations of London, Bristol, and other great towns; and from the way in which petitions for prohibitory enactments were treated by Edward I., Edward III., and others of our most able princes, it may be inferred that they were quite aware of the real motives of the petitioners. But during the civil wars, the princes on the throne and their competitors were particularly anxious to conciliate the support of the great towns; and there was no mode of accomplishing this so easy, and at the same time so effectual, as the exclusion of foreign products and artisans. Hence the reigns of Edward IV. and Richard III. form an important epoch in the history of the prohibitive system. The preamble to the great restraining act of 1643, (3rd Edward IV. cap. 4.) contains an epitome of the allegations usually put forth by the advocates of prohibition:—'Whereas in the said parliament, by the artificers, men and women, inhabiting and resident in the city of London, and the cities, towns, boroughs, and villages within this realm and Wales, it hath been piteously shewed and complained, how that all they in general, and every of them, be greatly impoverished, and much injured and prejudiced of their worldly increase and daily living, by the great multitude of divers chaffres and wares, pertaining to their mysteries and occupations, being fully wrought and ready made to sale, as well by the hands of strangers, being the king's enemies as others, brought into this realm and Wales from beyond the sea, as well by merchant strangers as denizens, and other persons, whereof the greatest part is deceitful and nothing worth, in regard of any man's occupation or profit, by occasion whereof the said artificers cannot live by their mysteries and occupations as they used to do in times past; but divers of them, as well householders as hirelings, and other servants and apprentices in great numbers, be at this day unoccupied, and do hardly live in great idleness, poverty, and ruin, whereby many inconveniencies have grown before this time, and hereafter more be like to come, (which God defend) if due remedy be not in their behalf provided, &c.'

It seems not to have then occurred to any one that reciprocity is of the essence of commerce. Foreigners import nothing without getting an equivalent; so that when we consume large quantities of their goods, it admits of demonstration that they consume equally large quantities of ours. Admitting, therefore, that the allegations referred to above were true, yet it is plain that the idleness and poverty complained of could not be obviated by prohibiting importation. Such prohibitions might give additional employment to the producers of such articles as had previously been supplied by the foreigner; but it is certain it could not do this without depriving all those of employment who had been engaged in the production of the articles sent abroad in payment of the imports. A prohibition never fails to destroy as much, or more, on the one hand, as it builds up on the other. It is a contradiction and an absurdity to suppose that the prevention of importation should increase the field of employment. All that it can possibly do, is to divert labour into channels into which it would not naturally flow, and in which it is, consequently, sure to be less productive than if it had been left to seek out investments for itself. But such arguments are reluctantly admitted, even in the nineteenth century, and could not, therefore, be supposed to have much influence in the fifteenth. The remedy then provided for the grievances complained of, was the prohibition of almost every wrought article, either of convenience or ornament, at that time known. This prohibition was renewed and extended by the act of 1484. (1st Richard III. cap. 12.)

The monopoly principles that were thus early engrafted into our commercial policy have continued ever since to maintain their ground. During the sixteenth century they were sometimes partially suspended, but they were never wholly repealed, and were always enforced whenever any circumstance occurred to give additional influence to the manufacturers and the incorporated bodies.

The justly celebrated William Caxton was a member of the Mercers' Company of London, and was employed by Edward IV. in the negotiation of a commercial treaty with Philip, Duke of Burgundy. While engaged in this mission, he acquired a knowledge of the then recently invented art of printing, which he introduced into England. It would be worse than useless to dwell on the importance of this invention. Knowledge ceased to be confined to a few individuals. Books being multiplied and cheapened in a degree that could not previously have been supposed possible, became accessible to all classes; nor can there be a doubt that the universal diffusion of every sort of information by means of the press, has contributed more than anything else to the wonderful improvements that have since been made in the arts and sciences.

2. *Progress of commerce and industry in England, from the accession of Henry VII. to the death of Elizabeth.*—The accession of Henry VII., in 1485, marks an important era in the history of English commerce. It terminated that civil war which had so long deluged the country with blood; while the vigorous and prudent, though severe administration of the king, and the good terms on which he endeavoured to keep with his neighbours, gave unusual facilities for the prosecution of commercial enterprises.

The love of money, the ruling passion of this monarch, led him to set a high value on commerce, which he endeavoured directly to promote. It may be doubted, however, whether the laws passed in his reign with this view, were not, speaking generally, rather injurious than otherwise. Attempts were made to fix the prices of several commodities and articles of provision; the taking of interest for money was forbidden, under very severe penalties; as were the profits of exchange, on pretence of their savouring of usury! The exportation of money, plate, and bullion, was prohibited; and aliens who had imported produce into the kingdom, were obliged to invest the produce of their sales in English commodities, lest the precious metals might be carried out.

Some of Henry's laws are, however, characterized by sounder views of public policy. Of this description is an act passed in 1494, providing for the uniformity of weights and measures. It directs that models of all standard weights and measures be delivered to the knights, citizens, and burgesses in parliament assembled; that the latter should deliver them to the mayor and bailiffs of the cities and towns which they represented; these functionaries being required once a year to compare the weights and measures in use in their respective districts with the models; to destroy those that did not correspond with them, and to impose fines on those by whom they were used. Unluckily, however, it was speedily found that the models sent to the country did not exactly correspond with the standards in the exchequer; and though the defect was remedied, it seems to have thrown so much discredit on the project, that the advantage resulting from it was comparatively unimportant.

The vexatious restraints on industry, imposed by the different corporate bodies, were in some respects modified by Henry VII. They were prohibited from making by-laws without the consent of three of the chief officers of state; but this judicious regulation seems to have speedily fallen into disuse. Corporations were also prohibited from imposing tolls at the gates of their towns. The cities of Gloucester and Worcester had proceeded so far in this way as to levy a tax on vessels or boats navigating the Severn, which was abolished by this act, (19th Hen. VII. cap. 18.)

Henry negotiated a great many commercial treaties with foreign countries. Of these the most celebrated was the treaty entered into with the Archduke Philip, sovereign of the Netherlands, in 1496. Unlike the greater number of such agreements, it was founded on a fair principle of reciprocity; and contains several very judicious regulations for facilitating the intercourse between the two countries, and making it advantageous to both. It was denominated the *Intercursus Magnus*; and was exceedingly popular in England as well as in the Netherlands. As this treaty has been often referred to, and throws considerable light on the nature of commercial transactions at the time, we have given it below. The precautions taken to prevent piracy, and the stipulations as to shipwrecked vessels, are particularly worthy of attention.[*]

We have already noticed the establishment of the company of merchant adventurers, originally the fraternity of St. Thomas Becket. They were not a joint stock, but a regulated company, established in London. It would seem that they had early acquired, or usurped the right, of demanding a fine from the merchant adventurers belonging to other parts of England, trading to foreign countries, and particularly to the Netherlands. At first this fine was only an old noble, or 6*s.* 8*d.*, money of the time; but by successive additions it was raised to no less than 40*l.*, money of the time; and was justly complained of by the merchants and traders in the outports as an intolerable burden. In 1497, an act was passed (12th Hen. VII. cap. 6.) to obviate this abuse. It declares that all Englishmen shall have free liberty 'to trade to the coasts of Flanders, Holland, Zealand, and Brabant, and other parts adjoining,' on payment of a fine of ten marks (6*l.* 13*s.* 4*d.* money of the time,) to the merchant adventurers of London. That this act effected a very great improvement on the previous practice is obvious; but the circumstance of a private company in London being allowed to impose a fine on all merchants in other parts of the kingdom engaged in foreign adventures, shows how little the most obvious principles were then understood.

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[*] 1. Mutual liberty allowed on both sides to trade to each other's dominions, without asking for licence or passport. To carry all manner of merchandise, whether wool, leather, victuals, arms, horses, jewels, or any other wares, either by land or water, from Calais, England, and Ireland, to the countries of Brabant, Flanders, Hainault, Holland, Zealand, and Mechlin, and from these provinces to Calais, England, and Ireland; and that both parties may freely resort to and unload at all the customary ports, and reload, and thence freely depart.

2. Merchants, mariners, &c. may on both sides carry weapons of defence in their ships, and bring them on shore to their lodgings, where they shall leave their swords, daggers, &c. till they shall go on board again.

3. The fishers on both sides may freely fish on the seas without any safe conduct asked; and when driven into each other's ports by tempest or other necessity, they shall be safe there, and have free liberty to depart, paying the customary dues.

4. Pirates and ships of the enemies of either party shall not be permitted to rob or otherwise injure the subjects of either party in their respective havens and countries; nor to land nor sell there the goods or ships taken from either party.

5. And to the end that captures of ships, persons, and goods may hereafter cease between both parties, it is agreed that security, to double the value of ship and goods, be given by shipmasters setting out on a voyage, that they shall not commit any piracy or robbery on the subjects of the other party.

6. The ships of either party driven into the ports of the other party by storm, enemies, &c., shall remain there safely, and may depart again freely; but they shall not open nor unload their merchandise without a visible necessity, and without the presence and the consent of the custom-house officer.

7. Merchants, mariners, &c. of both parties shall not import into the other party's country the goods of an enemy to that party.

8. If it shall happen that a ship of either of the contracting parties be wrecked on the shores of the other party, though there shall not be found therein either man, woman, cat, dog, or cock, yet the goods in the said ship shall be preserved, and laid up for a year and a day, by the proper officers of the place; within which time the proper owners may come and make out their claim, and receive their goods, paying the requisite expenses for recovering and keeping the same.

9. The merchants of both parties shall have proper houses for themselves and their merchandise in the several towns and cities of the other party, with the same privileges and immunities as have been customary before the last fifty years; and shall in all respects be as kindly treated as any other foreign nation residing there.

10. The officers in either country appointed for searching for contraband goods, shall perform it civilly, without spoiling them, or breaking the chests, barrels, packs, or sacks, under pain of one month's imprisonment. And when the searchers shall have opened them, they shall assist in the shutting and mending of them, &c. Nor shall they compel the owners to sell or dispose of the same against their own inclinations.

11. If the English residing in the Netherlands shall suspect a debtor there to intend an elopement, the debtor may be compelled to give security there for paying the debt; and the Netherlanders in England shall enjoy the same benefit.

12. Upon any damage or violence done to the subjects of the contracting parties, the damaged party shall not immediately take out letters of marque or reprisals, nor arrest either the person or the goods of the accused party, but shall first warn or summon him before his respective prince, who alone ought to give redress to the injured party.

13. All letters of marque and reprisals shall be called in, and shall remain suspended on both sides, unless it shall be otherwise determined by a future congress of both parties.

14. And it is forbidden to the English and others to enter the castle of Sluys, in Flanders; and it is now stipulated that in case, through ignorance or any other cause not appearing to be fraudulent, any merchants or other subjects of the King of England shall happen to enter the gate of the said castle, they shall not, merely from that cause, be injured in their persons nor goods.

15. The English shall freely bring bullion of gold or silver through the Netherlands and from other countries, in order to carry the same into England, provided they bring certificates from the proper officers of those other countries of the quantity of bullion so bought or otherwise lawfully acquired.

16. None but the public and anciently known and received weights shall be used in either country.

17. For conservators of this peace and intercourse of commerce, there were appointed by Henry VII., on the part of England, sundry lords therein named, and likewise the mayors and aldermen of London, York, Bristol, Winchester, Canterbury, Rochester, Southampton, Sandwich, (Sandwic) Dover, Lynn, Dartmouth, Plymouth, Hull, Winchelsea, Boston, Yarmouth, and Berwick, who also bound themselves, to the Archduke Philip, under the obligation of all their goods, present and future, to endeavour, to the utmost of their power, that their sovereign Henry VII. should faithfully keep it inviolable in all its parts; and on the part of the Archduke there were also bound several lords of his countries, and also the burgo-masters of Gaunt, Bruges, Ypres, Dunkirk, Newport, Antwerp, Bergen-op-zoom, Doort, Delft, Leydes, Amsterdam, Middleburgh, Zirikzee, Terveer, Mechlin, and Briel, to see the said peace and intercourse of commerce faithfully kept.

Signed at London, 24th Feb. 1496; ratified April, 1496.

The influence of the measures adopted by Henry VII., in the view of directly encouraging commerce and navigation, was trifling compared with the influence of those which operated indirectly, by putting down abuses and establishing the authority of the law. From a very remote period the great lords had been accustomed to maintain vast numbers of servants and retainers, partly for the purpose of displaying their grandeur, and partly as the means of security and of attack. The retainers generally lived on the estates of their masters, who supplied them with badges and liveries, and with provisions while in service. These persons were not only ready upon all occasions, when called upon, to support the cause of their lords, to execute their orders, and *to give evidence for them in courts of law*, but trusting to their influence to screen them from justice, they scrupled not, whenever an opportunity offered, to attack those they considered as their master's enemies! The predatory habits acquired in such a mode of life could not be easily laid aside; and when dismissed from service, or not employed by their masters, they generally supported themselves by theft and robbery. Many statutes had been passed for repressing so enormous an abuse, but without any perceptible effect; and during the civil wars the evil attained to a frightful excess. No provision being made for disbanded soldiers or retainers, it was not unusual to expose liveries for sale, and the competition for them amongst idle and disorderly persons was such that they occasionally brought considerable sums. Henry VII. determined to abate this nuisance; and his sagacity and firmness, and the circumstances under which he was placed, enabled him to succeed. Many of the principal nobles had perished in the struggles terminated by the battle of Bosworth; and their power had been impaired by repeated confiscations, and by the extraordinary expenses they had had to sustain. They were, therefore, but ill-fitted to defend their privileges against so able and powerful a prince as Henry, who perceived and made use of his advantage. The laws against giving badges and liveries, and employing retainers, were renewed and enforced with a rigour that none could expect to elude. At the same time, too, that the barons were compelled to lay aside their feudal pomp, and to dismiss their vassals, the improved and more luxurious habits that began to be diffused throughout the nation, disposed them to receive money payments, instead of personal services, from their tenants and dependents. And the lower ranks of people being thus, as it were, abandoned by their feudal superiors, were obliged, instead of trusting to them for support and protection, to resort to some species of industry, and to respect those laws they could no longer trample upon with impunity. The change that was thus effected was of the greatest importance, and had the most decisive and beneficial influence on all ranks and orders. Had the practice of maintaining crowds of retainers continued, order and tranquillity could never have been established.

The power of the great lords was undermined by another law, which, though less felt at the time, has been hardly less important perhaps in its consequences than any other passed in the reign of Henry VII. This was the legitimation of the practice, introduced in the reign of Edward IV., of breaking entails by a fine and recovery. 'By means of this law,' says Hume, 'joined to the beginning luxury and refinement of the age, the great fortunes of the barons were gradually dissipated, and the property of the commons increased in England. It is probable that Henry foresaw and intended this consequence; because the constant scheme of his policy consisted in depressing the great, and exalting churchmen, lawyers, and men of mean families, who were more dependent on him.'

The circle of commerce being now enlarged on all sides, merchant-ships began to be built of larger size, and to be fitted up with better accommodations. Henry VII. was a considerable ship-owner. He built several large ships, which, when not employed in the public service, he was accustomed to freight to the merchants.

Still, however, these favourable circumstances had less influence than might have been imagined in extending the sphere of foreign commerce. The nation had been so long distracted by intestine commotions, and the merchants and seamen of the Hanse Towns and the Italian Republics continued to engross so large a share of the trade and navigation of England, that but few, comparatively, of Henry's subjects had any desire to engage in remote adventures. The persevering efforts of the Portuguese to discover a route to India by sailing round Africa, and their discoveries, appear to have excited little attention and no emulation in England. The discovery of a new world by Columbus was, indeed, too extraordinary an event not to arrest the attention of every one, and to arouse even the most indifferent to some degree of enterprise. An association having been formed in England for the purpose of prosecuting discoveries, a patent was granted by Henry to John Cabot and his three sons, authorising them to make discoveries, 'on their own proper costs and charges,' in all parts of the world unknown to Christians. Under this sanction, an expedition, consisting of five ships, sailed from England in 1496. It was commanded by Sebastian Cabot, the second son of John, who, though his father was a Venetian, was himself born in Bristol. In point of nautical skill, sagacity, and perseverance, Sebastian Cabot seems to have been little, if at all, inferior to Columbus; and as the lands seen by the latter in his first and second voyages were situated in the West Indies, the honour of being the first discoverer of the American continent is due to Sebastian. He sailed along the whole coast from Hudson's Bay to Florida; and in so far as priority of discovery gives any right to dominion, the claim of the English to the exclusive possession of the greater part of the continent of North America is unquestionable*.

Two years after (1498) Cabot was sent out as commander of a squadron of six ships, equipped at King Henry's expense, further to explore the lands and islands discovered on his previous voyage. But though this shows that the King was not insensible to the value and importance of so splendid a discovery, no attempt was made either in his reign, or for a long time after, to turn it to account, by founding a colony in the countries visited by Cabot, or by opening an intercourse with them.

Various circumstances contributed to occasion this neglect. As soon as Ferdinand and Isabella, by whose marriage the crowns of Castile and Arragon had been united, learned the success of Columbus, they applied to Pope Alexander VI. for a grant of such territories as they might discover, that were in the possession of infidels. The Pontiff, desirous at once to display, and at the same time to extend, his power, readily assented to the wish of the Spanish monarchs. As vicar and representative of Jesus Christ, he conveyed to them the full right to, and sovereignty of, all the countries lying to the west of an imaginary line, supposed to be drawn from pole to pole a hundred leagues to the westward of the Azores. And as the Portuguese had previously acquired, by a bull of Eugene IV., a right to all the countries between Cape Non, on the coast of Africa, and the continent of India, the two peninsular nations engrossed between them, by what was then believed to be a good title, two-thirds of the entire surface of the globe! The lands discovered by Cabot plainly formed a part of the ample donation made to the crown of Spain by Alexander VI.; and ridiculous as the pretension to make such a grant may now appear, its validity was, at the time, universally acknowledged. Henry besides was exceedingly anxious to preserve the friendship of Ferdinand, for whom he professed the greatest esteem; and was endeavouring, indeed, at the very moment when Cabot's discovery transpired, to negotiate the marriage that afterwards took place between his eldest son and the Princess of Spain.

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* The Memoir of Sebastian Cabot (by Mr. Biddle, an American), published in 1831, is one of the most valuable books that has ever appeared on the history of maritime discovery. The author has resorted to original sources. He discovered in the Rolls Chapel, and has printed for the first time, the patent granted to John Cabot in 1498, in which reference is made to '*the landes and isles of late found by the said John*;' and which, consequently, puts to rest all doubts as to the era of Cabot's discovery. The reasons assigned by the author for concluding that Sebastian Cabot the son, and not John the father, commanded in both expeditions, are less satisfactory than the other parts of the work.

These circumstances, coupled with the distrustful character of the king, sufficiently account for no effort being made by the English, during the reign of Henry VII., to found any colony, or to acquire any footing in a distant country. His son and successor, Henry VIII., was frequently at war with Spain; and having emancipated himself from the authority of the Pope, the bull of Alexander VI. could hardly have much influence on his conduct. His subjects had also become more commercial, and exaggerated ideas began to be entertained of the value of foreign possessions. But in the first part of his reign, Henry engaged with inconsiderate ardour in the great struggle between Charles V. and Francis I.; and in the sequel he, as well as the nation, was too much occupied and agitated with domestic affairs, particularly with the subversion of the papal authority, and the disputes to which it gave rise, to be able to bestow any considerable degree of attention on projects of discovery or colonization. But, though not immediately concerned in them, the splendid discoveries of Columbus and Vasco de Gama had a powerful influence in England, as well as in every other country. 'The enlargement of commerce and navigation increased industry and the arts everywhere: the nobles dissipated their fortunes in expensive pleasures; men of an inferior rank both acquired a share in the landed property and created to themselves a considerable property of a new kind, in stock, commodities, art, credit, and correspondence. In some nations, the privileges of the commons increased by this increase of property. In most nations, the kings, finding arms to be dropped by the barons, who could no longer endure their former rude manner of life, established standing armies and mastered the liberties of the kingdom. But in all places the condition of the people, from the depression of the petty tyrants, by whom they had formerly been oppressed rather than governed, received great improvement, and they acquired, if not entire liberty, at least the most considerable advan-

of events thus tended to depress the nobles and exalt the people, Henry, who also embraced that policy, has, perhaps, acquired more praise than his institutions, strictly speaking, seem of themselves to deserve on account of any profound wisdom attending them.'—(*Hume's England*, cap. xxvi.)

Like his father, Henry VIII. was disposed to promote the interests of commerce, and some of the measures he took in this view were not ill calculated to effect their object. In 1515 he established, or rather, perhaps, renewed and extended, the famous guild or corporation of the Trinity House at Deptford, for the licensing and regulating of pilots, and for the erection and ordering of light-houses, beacons, &c. Similar establishments were soon after founded at Hull and Newcastle. In this instance Henry followed the example of Charles V., who, observing the numerous shipwrecks in the voyages to the West Indies occasioned by the ignorance of seamen, established at the *Casa de Contratacion*, in Seville, lectures on navigation, and a pilot major for the examination of other pilots and mariners. Charles also directed treatises on navigation to be published for the use of navigators.

On the whole, however, there is little reason to think that commerce gained much by the efforts of Henry VIII. for its encouragement; and its increase during his reign ought rather to be ascribed to the gradual development of the national resources, occasioned by the subversion of the feudal system, and the natural growth of opulence, than to the efforts of government to excite the dormant energies of the people. Many of the laws and institutions of Henry were indeed calculated to have a precisely opposite effect. Among others that might be mentioned, the influence of which, had they been acted upon, must have been exceedingly injurious, were statutes restraining the cloth manufacture, in Worcestershire, to the city of Worcester, and four other towns, and prohibiting the manufacture of coverlets anywhere in the county of York except in the city. The groundless complaints of the city of London against aliens were favourably listened to by the king. Henry even went so far as to affirm in an edict of the star-chamber, printed amongst the statutes, that the foreigners starved the natives, and obliged them from idleness to have recourse to theft murder, and other enormities! To prevent the increase of these imaginary evils, fresh restraints were laid on the employment of foreign artisans, and on the residence of foreign merchants. But, as the philosophical historian has observed, Henry had done better to have encouraged foreign merchants and artisans to come over to England; which might have excited the emulation of the natives, and improved their skill.

Henry VIII. may be styled the founder of the royal navy of England. He appointed a board of commissioners for its regulation; erected warehouses for naval stores; and constructed the dockyards at Deptford and Woolwich for building and equipping ships of war. Some of Henry's predecessors had a few ships, which they employed sometimes in trade, and sometimes in war; but they did not deserve the name of a navy. At his death, however, fifty-three ships belonged to the crown, some of which were of considerable magnitude. The Henry Grace de Dieu was of 1,000 tons; she carried 19 brass and 103 iron guns, and her crew consisted of 301 mariners, 349 soldiers, and 50 gunners. There was another ship of 700 tons, two of 600, and two of 500; the tonnage of the whole fleet being 6,255 tons. The trading ships were also larger and better built than at any previous period.—(*Henry's Great Britain*, vol. xii., p. 344.)

The reign of Henry VIII. is famous for the introduction of several new manufactures, and of many new articles of food and clothing. Among the former, the art of knitting stockings may be mentioned; for, though Howell states that Henry wore only cloth hose, (*History of the World*, vol. iii., p. 222,) it is certain that knit stockings were then made in England, though probably in very limited quantities and only of wool. Sir Thomas Gresham, the famous merchant, presented Edward VI. with a pair of silk stockings received from Spain; and Queen Elizabeth is represented as having laid aside the use of cloth hose in the third year of her reign. Lord Herbert affirms, in his history of Henry VIII., that cannon were not made in England till 1535; and though the perfect accuracy of this statement has been impeached, there is no doubt that by far the greater number, if not the whole, of those previously made use of, were imported. Soap was not manufactured in London till 1524. The culture of currants, hops, and several other fruits and vegetables, seems to have been, for the first time, introduced into England about this period. The earliest notice of hops in the statute-book occurs in 1552. The introduction of turkies into England dates, it is said, from Henry VIII.—(*Anderson*, vol. i., p. 354.)

The prodigal expenditure of Henry VIII., having speedily occasioned the dissipation of the immense treasures left by his father, forced him to resort to many disgraceful expedients for obtaining supplies, and among others to the degradation of the coin. He carried this vile species of fraud to an extent unknown in any other period of our history; and the consequences were most pernicious. Coins of full weight were either hoarded or withdrawn from circulation; and all sorts of produce were withheld from market, so that prices rose to the full extent of the degradation, and everything was thrown into extreme confusion. The most violent measures were resorted to for the purpose of counteracting these effects. Farmers were ordered to bring their grain to market, and to sell it at reasonable prices; buying in one market in order to sell in another was prohibited under the severest penalties; and the exportation of all sorts of provisions was forbidden except to Calais. But such arbitrary measures only served to aggravate the evil. 'At length,' says Mr. Martin Folkes, 'it was found by experience that gold and silver had, by the common consent of all people, throughout the civilized parts of the world, acquired certain real and proper values; and that in such a nation as this, not destitute even then of all commerce with strangers, it was impossible that the arbitrary value set upon pieces of base metal could, for any considerable time, supply the want of the silver that used to be contained in the pieces of the same denominations. Whatever names were given to those pieces of base metal, or by whatever authority their imaginary value was supported, the poor people would either not bring their provisions at all to the markets, to exchange them for such money, or would then sell them at much higher rates than before; as the nominal sums they received for their goods would not now purchase them the same conveniences elsewhere, as the same nominal sums of better money had formerly done. It was, therefore, judged absolutely necessary to reform and to amend the coin. The affair was very seriously considered, and the work was undertaken and carried on with so much diligence and vigour, that within a few months a reformation of the money was brought about, truly memorable, and no less remarkable than the former abuses of it had been: for the new pieces that were coined before the end of this year 1551, were of more than *four times* the value of those of the same denominations that had been coined in the former months of the same*.'

The reformation of the coin was nearly completed in the early part of the reign of Elizabeth, and was perfected before its close. *Moneta in justum valorem restituet*, says her historian. Her conduct in this respect has been deservedly eulogized; and on two memorable occasions, in 1698 and 1819, was appealed to with effect by the advocates of sound principles.

Though, in their immediate effects, the Reformation, and the destruction of the monasteries, were probably injurious to the lower classes, they have been of the greatest public advantage. The Reformation broke those trammels by which the human mind had been enchained for ages, and gave it the impulse which it still retains. The destruction of the monasteries converted into industrious citizens many thousand individuals of both sexes, who, with very few exceptions, lived, under the cloak of religion, in luxurious idleness, debauched by every sort of vicious indulgence. A crowd of fast days and superstitious observances were at the same time abolished; and the court of Rome ceased to derive from England a large part of the supplies required to defray its extravagant expenditure. It is no part of our business to inquire into the motives of Henry in effecting so great a revolution. His measures, how unworthy soever the principle whence they sprung, were as beneficial as if they had been dictated by the most deliberate wisdom. A less rough and violent hand might have been inclined to tamper with abuses which the public interest required should be rooted out.

Notwithstanding the little encouragement given by the king and the public, some attempts at discovery, with a view to commerce, were made in the reign of Henry VIII. The grand object at that time, and for several years afterwards, was the discovery of a passage to India, by sailing in a north-westerly direction, that they might thus avoid infringing the rights claimed by the Portuguese. These efforts were prosecuted with much perseverance. Notwithstanding the ill success with which they had been attended, a fresh attempt of this sort was made in 1553, in the reign of Edward VI., in two ships commanded by the famous Sir Hugh Willoughby and Captain Richard Chancellour. These navigators carried with them a letter from the king, translated into Latin, Greek, and other languages, addressed to all kings, princes, and persons in authority. This letter, which is preserved in Hakluyt, evinces the most enlightened views as to commerce and discovery; and is, in all respects, so creditable to our ancestors, that we shall lay an extract from it before the reader. It begins by setting forth the disposition to cultivate the love and friendship of his kind, implanted by the Almighty in the heart of man,—the consequent duty of all, according to their power, to maintain and augment this desire,—and the conduct of the king's ancestors in this respect, which had ever been 'to shewe good affection to those that came to them from farre countries.' It then proceeds as follows:—

'And if it be right and equity to shewe such humanities to all men, doubtless the same ought chiefly to be shewed to merchants, who, wandering about the world, search both the land and the sea, to carry such good and profitable things as are found in these countries to remote regions and kingdoms, and again to bring from the same such things as they find there commodious for their own countries: both as well that the people to whom they goe may not be destitute of such commodities as their countries bring not forth to them, as that also they may be partakers of such things whereof they abound. For the God of heaven and earth, greatly providing for mankinde, would not that all things should be found in one region, to the end that one should have need of another; that by this means friendship might be established among all men, and every one seek to gratifie all. For the establishment and furtherance of which universal amitie, certaine men of our realme, moved hereunto by the said desire, have instituted and taken upon them a voyage by sea into farre countries, to the intent that, between our people and them, a way may be opened to bring in and carry out marchandises, desiring us to further their enterprises. Who, assenting to their petition, have licensed the right valiant and worthy Sir Hugh Willoughby, Knight, &c., according to their desire, to goe to countries, to them heretofore unknown, as well to seek such things as we lacke, as also to carry to them, from our regions, such things as they lacke. So that hereby not only commoditie may ensue both to them and us, but also an indissoluble and perpetual league and friendship, &c. We, therefore, desire you, kings and princes, and all others to whom there is any power on earth, to permit, unto these our servants, free passage by your regions and dominions; for they shall not touch any thing of yours unwilling unto you. Consider you that they also are men. If, therefore, they shall stand in neede of anything, we desire you of all humanitie, and for the nobilitie which is in you, to aide and help them with such things as they lacke. Shewe yourselves towards them, as you would that we and our subjects should shewe themselves towards your servants, if at anie time they shall pass by our regions.'—(*Hakluyt*, vol. iii., p. 231.)

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* Table of English Silver Coins, p. 86.

This expedition was partly successful, and partly unsuccessful. The ships having parted company in a storm, Willoughby took refuge in a harbour in Russian Lapland, where, having attempted to winter, he, and all his companions, perished of cold. Chancellour was more fortunate. Having entered the White Sea, he wintered in safety at Archangel, and, though the first stranger who had visited their port, was kindly treated by the inhabitants. Here Chancellour learned that Archangel formed part of the dominions of the Grand Duke or Czar of Muscovy, who resided at Moscow, 1200 miles distant. Undismayed by the difficulty and danger of the journey, Chancellour set out for Moscow, where he arrived in safety. He was hospitably received by the Czar Ivan Vassilovitch; who, perceiving the advantages that might accrue to his subjects from an intercourse with the states of Western Europe, gave Chancellour a letter to the King of England, in which he invited his subjects to trade with his dominions, and gave them ample assurances of favour and protection. In consequence, an active and advantageous intercourse was immediately established with Archangel; which continued, till the foundation of Petersburgh, to be the only port in the Russian dominions frequented by foreigners.

In all barbarous and semi-civilized countries dealers in corn are the objects of popular indignation. The people suppose that they would obtain this great article of provision at a lower price were they to buy it directly from the producers. The profits of the middleman, or dealer, seem to be wholly taken out of their pockets. They do not reflect that if he were driven from the trade, the farmer would be obliged, with much inconvenience to himself, to perform the duties that he performs; to carry his corn to distant markets, and to sell it in such small quantities as might suit the demands of his customers. It would obviously be impossible for him to do this without having additional capital at his command, and without his attention being constantly diverted from the culture of his farm. But the mere disposal of the crop to the consumers is but the smallest part of the business of the corn dealers. They estimate and equalize the consumption with the supply. If the corn merchants, who endeavour to inform themselves correctly as to such matters, ascertain that the crop of any given season is deficient, they immediately raise its price, so that the whole nation is placed as it were upon short allowance; improvident consumption is checked; and the supply that might otherwise have been exhausted in ten months is distributed equally over the twelve. Dealers in corn also buy up a portion of the produce of a plentiful year, and reserve it as a stock to be disposed of in the first scarcity that occurs; so that they not only equalize the supply of each particular season, but contribute to equalize the supplies of different seasons. Their operations are thus advantageous alike to the consumers and the producers. They protect the former from famine, and husband for them those resources they could not have so advantageously husbanded for themselves, and they protect the latter from destructive oscillations of price. In fact, if there be one class of dealers more deserving of encouragement and protection than another, that class consists of those who deal in corn.

But, for the reasons already stated, our ancestors, instead of encouraging the trade of the corn dealers, endeavoured to annihilate it altogether. By the statute 5 and 6 Edward VI. cap. 14, it was enacted, 'That whosoever shall buy any corn or grain with intent to sell it again, shall be reputed an unlawful engrosser; and shall for the first fault suffer two months' imprisonment, and forfeit the value of the corn; for the second, suffer six months' imprisonment, and forfeit double the value; and for the third, be set in the pillory, and suffer imprisonment during the king's pleasure, and forfeit all his goods and chattels.'

But it was found impossible to dispense entirely with the services of those who were then denominated kidders, or carriers of corn; no one, however, was allowed to undertake this business without having previously obtained a license, ascertaining his qualifications as a man of probity and fair dealing. In the reign of Elizabeth, the privilege of granting such licenses was confined to the Quarter Sessions.

It would be useless to waste the reader's time by dwelling on the absurdity of such regulations. Those familiar with the prices of corn in the ages under review, are aware that the fluctuations exceed anything of which we can now form any idea. Owing to the badness of the roads, and to the difficulties in the way of transporting corn to any considerable distance, its prices in places remote from each other often differed considerably*; and it was almost always exceedingly scarce and dear before harvest.

As society advanced, the more intelligent portion of the community became aware of the impolicy of the restraints on the corn dealers. The rigour of the act of Edward VI. was, in consequence, modified by several subsequent statutes, principally enacted during the reign of the Stuarts. The statutory restrictions on the internal corn trade were not, however, entirely repealed till 1772. And, such is the influence of prejudice, that in 1800 an individual of the name of Rusby was indicted at common law, and convicted of the imaginary crime of *regrating*, that is, of selling a quantity of corn in the same market in which he had purchased it, at an advance of 2*s*. a quarter! So slow is the progress of sound philosophy even among those whose education and station ought to set them above vulgar delusions.

Mary, who espoused Philip II. of Spain, was quite as bigoted as her husband, to whose wishes she gave the readiest assent. She was, consequently, induced, not only by deference to the Pope's bull, but out of respect to Philip, to discountenance all plans of commerce or discovery that might have brought the English into collision with the Spanish, by exploring or settling any part of the New World. It is, however, pretty certain that the study of the Spanish language, which became fashionable at court after the marriage of Philip, and the facility which was thus afforded of reading Spanish works on geography and navigation, as well as the information obtained from the Spaniards who accompanied Philip to England, as to their possessions in the New World, and the policy followed in respect to them, excited the desire of the English to acquire some share in such valuable possessions; at the same time that it furnished them with information that was of material service in their expeditions during the following reign.

At length, under the vigorous sway of Elizabeth, the taste of the nation for naval enterprise was fully awakened. The attempt at invasion made by Spain, though it failed, opened the eyes of all classes to the importance of having a powerful fleet; at the same time that the enthusiasm inspired by the success which attended the English in their struggle with the armada, and in their expeditions under Drake, Raleigh, Hawkins, Frobisher, Norris, Borroughs, &c., infused a spirit of daring and boldness into our navigators, that rendered them equal to the most arduous undertakings. The attempts that were made to establish colonies in America, in the reign of Elizabeth, were not, however, successful. But in the early part of the reign of her successor, James I., the foundations were laid of the English empire in America; the unprecedented advance of which had a wonderful influence in promoting the commerce and navigation of the mother-country.

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* In fact such transportation was once prohibited. This appears from a regulation established in 1440, by which commissioners of the customs were authorised to grant licenses for the carrying of corn from one county to another.

The opening of the trade to India, and the formation of the East India Company, events of the utmost importance in the commercial history of the empire, illustrate the reign of Elizabeth. Captain Stephens, who performed the voyage in 1582, was the first Englishman who sailed to India by the Cape of Good Hope. The voyage of Sir Francis Drake contributed to make the English better acquainted with the newly-opened route to India. But the voyage of the celebrated Mr. Thomas Cavendish was, in the latter respect, the most important. Cavendish sailed from England in a little squadron, fitted out at his own expense, in July, 1586, and having explored the greater part of the Indian Ocean as far as the Philippine Islands, and carefully observed the most important characteristic features of the people and countries which he visited, returned to England, after a prosperous navigation, in September, 1588. Perhaps, however, nothing contributed so much to inspire the English with a desire to embark in the Indian trade, as the captures that were made at this time from the Spaniards. A Portuguese East India ship or carrack, captured by Sir Francis Drake, during his expedition to the coast of Spain, inflamed the cupidity of the merchants by the richness of her cargo, at the same time that the papers found on board gave specific information respecting the traffic in which she had been engaged. A still more important capture of the same sort was made in 1593. An armament fitted out for the East Indies by Sir Walter Raleigh, and commanded by Sir John Borroughs, fell in, near the Azores, with the largest of the Portuguese carracks, a ship of 1,600 tons burden, carrying 700 men and 36 brass cannon, and after an obstinate conflict carried her to Dartmouth. She was the largest vessel that had been seen in England, and her cargo, consisting of gold, spices, calicoes, silks, pearls, drugs, porcelain, ivory, &c., excited the ardour of the English to engage in so opulent a commerce.

In consequence of these and other concurrent causes, an association was formed in London, in 1599, for prosecuting the trade to India. The adventurers applied to the Queen for a charter of incorporation, and also for power to exclude all other English subjects who had not obtained a license from them, from carrying on any species of traffic beyond the Cape of Good Hope or the Straits of Magellan. As exclusive companies were then very generally looked upon as the best instruments for prosecuting most branches of commerce and industry, the adventurers seem to have had little difficulty in obtaining their charter, which was dated the 31st Dec. 1600: the corporation was entitled 'The Governor and Company of Merchants in London trading to the East Indies.' The first governor (Thomas Smythe, Esq.) and twenty-four directors were nominated in the charter; but power was given to the company to elect a deputy-governor, and in future to elect their governor and directors, and such other office-bearers as they might think fit to appoint. They were empowered to make bye-laws; to inflict punishments, either corporal or pecuniary, provided such punishments were in accordance with the laws of England; to export all sorts of goods free of duty for four years; and to export foreign coin or bullion to the amount of 30,000*l.* a year, 6,000*l.* of the same being previously coined at the mint; but they were obliged to import within six months after the completion of every voyage, except the first, as much silver, gold, and foreign coin, as they exported. The duration of the charter was limited to fifteen years; but with and under the condition that, if it were not found for the public advantage, it might be cancelled at any time upon two years' notice being given.—Such was the origin of the British East India Company,—the most celebrated commercial association either of ancient or modern times, and which has now extended its sway over the whole of the Mogul empire.

The trade from England to Africa commenced in 1526, when some merchants of Bristol sent thither cloth, soap, and a few other articles in Spanish ships. Within a short period, however, English ships traded direct to that continent, whence they brought ivory, gold dust, drugs, &c.; but the trade was of trifling importance till slaves began to be carried from the west coast of Africa to the West Indies. The famous Sir John Hawkins is said to be the first Englishman who engaged in this infamous traffic. Having fitted out a small squadron in 1562, he sailed for the coast of Guinea, where he procured a cargo of slaves, which he carried to St. Domingo, where he disposed of them to advantage. The first adventure seems to have excited little attention, but it was speedily followed by others; and as the trade increased, it was regarded as of great national importance. It was not till a comparatively recent period that the public became alive to its guilt and horrors.

There is scarcely, indeed, a branch of foreign commerce carried on at present, with the exception of that to China, that was not prosecuted, to a greater or less extent, in the reign of Elizabeth. The number of vessels was greatly increased. The flag of England floated on every sea, and everywhere commanded respect. Many branches of manufacture were introduced, while those already established received large augmentations.

The very well-informed Mr. John Smith estimates the value of the woollen goods annually exported from England to the Low Countries, Scotland, and the north of Europe, &c., in the early part of the reign of Elizabeth, at 1,200,000*l.* or 1,300,000*l.*; and this immense exportation of the manufactured article is exclusive of a considerable exportation of raw wool, which might be freely exported.* Many circumstances conspired to produce this development of the national resources. The old plan of paying rents by services was well nigh relinquished; the public tranquillity was rarely interrupted; and a taste for improved accommodations was diffused throughout all classes. In addition to these favourable circumstances, the persecutions in the Low Countries occasioned the emigration of several thousands of the most industrious citizens, many of whom came to England, and materially promoted the improvement of our manufactures.

There were some circumstances, however, the tendency of which was far less favourable. Of these the most injurious was the practice of giving patents to particular individuals or associations, authorising them to carry on some particular branch of trade or industry to the exclusion of others. Such monopolies were granted in immense numbers by the Queen to her favourites, who sold the patents to speculators, who raised the monopolized articles to whatever price they pleased, to the extreme injury of the public. The number and importance of the commodities that were thus assigned are quite astonishing. Currants, salt, iron, powder, cards, calf-skins, fells, pouldaries, ox-shin bones, train oil, lists of cloth, potashes, aniseed, vinegar, sea-coal, steel, aqua vitæ, brushes, pots, bottles, saltpetre, lead, accidences, oil, calamint, stone, glasses, paper, starch, tin, sulphur, new drapery, dried pilchards, with the trade in Spanish wools, are but a part of the commodities and businesses that were made over to monopolists. When this list was read in the House of Commons, a member cried out, *Is not bread in the number? Bread!* said every one with astonishment. *Yes, I assure you*, replied he, *if affairs go on at this rate we shall have bread reduced to a monopoly before next Parliament.* The monopolists were so exorbitant in their demands, that in some places they raised the price of salt from 1*s.* 4*d.* a bushel to 14*s.* and 15*s.* These high profits naturally produced interlopers and emigrants; and in order to secure their rights against encroachments, the patentees were armed with such high and arbitrary powers from the Council, that they were able to oppress the people at pleasure, and to exact money from such as they thought proper to accuse of interfering with their patents. The patentees of saltpetre, having the power of entering into every house, and of committing what havoc they pleased in stables, cellars, or wherever they suspected saltpetre might be gathered, commonly extorted money from those who desired to free themselves from this damage or trouble. And while domestic industry was thus restrained and fettered, most branches of foreign trade were surrendered to exclusive companies, who carried them on for their own advantage merely, without any regard to the interests of the public. —(*Hume's England*, cap. xliv.)

Such scandalous abuses became at length quite intolerable; and notwithstanding the deference that was then entertained for the royal prerogative, a Bill was introduced for abolishing all monopolies. It was zealously opposed by the courtiers; but the queen, who perceived how odious her grants were become, had the good sense to give way; and voluntarily cancelled those that were most oppressive. The evil, however, was not wholly abated till near the close of the following reign, when the famous statute of the 21st Jac. I. cap. 3. was passed. This statute declares that all monopolies, grants, and letters-patent, for the sole supplying, selling, and making of goods and manufactures, shall be null and void. It excepts patents for fourteen years, for the sole working or making of any new manufacture within the realm, to the true and first inventors of such manufactures, provided they be not contrary to law or mischievous to the state. It also excepts grants by act of parliament to any corporation, company, or society for the enlargement of trade, and letters-patent concerning the making of gunpowder and a few other articles. With the exception of the restraints imposed by the charters of incorporations, this act effectually secured the freedom of industry in Great Britain, and has done more, perhaps, to excite a spirit of industry, and to accelerate the progress of wealth, than any other in the statute-book.

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* Memoirs of Wool, vol. ii. p. 106.

Among other means for promoting and facilitating commerce and navigation, that were either discovered or improved during the reign of Elizabeth, may be mentioned the act of 1601, (43rd Eliz. cap. 12,) with respect to marine assurance. The preamble sets its utility in the clearest point of view. 'Whereas it hath been, time out of mind, an usage among merchants, both of this realm and of foreign nations, when they make any great adventure, (especially into remote parts,) to give some consideration of money to other persons, (which commonly are in no small number,) to have from them assurance made of their goods, merchandises, ships, and things adventured, or some part thereof, at such rates and in such sort as the parties assurers and the parties assured can agree; which course of dealing is commonly termed a policy of assurance; by means of which it cometh to pass, upon the loss or perishing of any ship, there followeth, not the undoing of any man, but the loss lighteth rather easily upon many than heavily upon few, and rather upon them that adventure not than upon those that adventure; whereby all merchants, especially the younger sort, are allured to venture more willingly and more freely.' According to Malynes, (*Lex Mercat.* p. 105,) insurance was first practised amongst us by the Lombards, and had, most probably, been introduced some time about the middle of the sixteenth century. It appears from the statute that it had originally been usual to refer all disputes that arose with respect to assurances, to the decision of 'grave and discreet' merchants, appointed by the Lord Mayor. But abuses having arisen out of this practice, the statute authorized the Lord Chancellor to appoint a commission for the trial of insurance cases; and in the reign of Charles II. the powers of the commissioners were enlarged. But this court soon after fell into disuse; and, what is singular, no trace of its proceedings can now be discovered.

There are no means of forming any accurate account of the extent of the foreign trade of England at the close of Queen Elizabeth's reign; but some interesting details with respect to it have been preserved in a tract of J. Wheeler, secretary to the Merchant Adventurers, printed at Middleburg in 1601. The Steel-yard and Hanseatic Associations having been previously abolished, the Merchant Adventurers engrossed, at the period referred to, most part of the trade to other countries. Their dealings are thus described by their secretary:—

'There is sent out yearly by the aforesaid company, at least 60,000 white cloths, besides coloured cloths of all sorts, kerseys, short and long bayz, cottons, Northern dozens; the just value of these 60,000 white cloths cannot well be calculated or set down, but in my opinion they are not worth less than 600,000*l.* sterling.

'The coloured cloths of all sorts, bayz, kerseys, &c., I reckon at the number of 40,000 at least; and they are worth 400,000*l.* sterling.

'There goeth also out of England, besides their woollen cloths, into the Low Countries, wool, woolfels, lead, tin, saffron, coney-skins, leather, tallow, alabaster, stones, corn, beer, and divers other things, amounting unto great sums of money.

'We have next to show, what the Merchant Adventurers buy, for return, of strange nations and people frequenting their mart towns and bringing their country commodities thither.

'Of the Dutch and German merchants they buy Rhenish wine, fustians, copper, steel, hemp, onion seed, copper and iron ware, lattice, kettles and pans, linen cloth, harness, saltpetre, gunpowder, all things made at Nuremberg; and, in fine, there is no kind of wares that Germany yieldeth, but generally the Merchant Adventurers buy as much or more thereof as any other nation.

'Of the Italians they buy all kinds of silk wares, velvets wrought and unwrought taffitas, satins, damasks, sarsnets, Milan fustians, cloth of gold and silver, grograms, camlets, satin and sewing silk, organzine, orsoy, and all other kind of wares either made or to be had in Italy.

'Of the Easterlings they buy flax, hemp, wax, pitch, tar, wainscot, deal boards, oars, corn, furs, cables and cable-yarn, tallow, ropes, masts for ships, soap ashes, estridge wool, and almost whatsoever is made or grown in the east countries.

'Of the Portuguese they buy all kinds of spices and drugs.

'With the Spaniards and French they have not much to do, by reason that other English merchants have had a great trade into France and Spain, and so serve England directly from thence with the commodities of those countries.

'Of the Low Country merchants, or Netherlanders, they buy all kinds of manufactures and handiwork not made in England; tapestry, buckram, white thread, inkle, linen cloth of all sorts, cambrics, lawns, madder; and an infinite number of other things, too long to rehearse. I have heard it credibly reported, that all the commodities that come out of all other countries besides England, were not wont to set so many people at work in the Low Countries as the commodities which came out of England only did; neither that any other two of the greatest nations that frequented the said Low Countries for trade, buy or carry out so much goods in value as the Merchant Adventurers.'—(See pp. 25—28, original edition. We have modernized the spelling, but made no other alteration.)

Wheeler gives no data by which to judge of the total value of the exports and imports; but in an official account given by Misselden, in his *Circle of Commerce*, (p. 121,) published in 1623, the total value of the exports in 1612 is set down at 2,487,435*l*., and that of the imports at 2,141,151*l*.; and this, if accurate, may be considered as not differing materially from their value in 1601.

No mention is made in the account given by Wheeler of sugar, which, however, had been imported, though in small quantities, long previously. Tobacco had barely been introduced into England in the reign of Elizabeth; tea was not heard of till half a century afterwards; and the foundations of the cotton manufacture had not been laid. The stimulus given by the desire to possess these and other articles, and the additional scope afforded for the exercise of talent and enterprise in the new channels of employment and adventure that were now opened, had a most astonishing influence. The progress of improvement was somewhat retarded by the civil war during the reign of Charles II.; but the retardation was only temporary; and it has continued ever since rapidly to advance. At this moment the manufactures and commerce of Great Britain have attained to an unrivalled degree of improvement, and to an extent that in the earlier ages would not have been deemed possible. Nor is there any reason to suppose that they have reached their zenith. On the contrary, the greater freedom of industry we now enjoy, the greater amount of our capital, and the greater skill and intelligence of our merchants and artificers, will (supposing the public tranquillity is preserved) undoubtedly lead to still more astonishing displays of ingenuity and invention.

The coasting trade of England was, at an early period, very considerable; and it has continued to increase even more rapidly than the population and wealth of the country. Its great amount is principally to be ascribed to the ready access afforded by the Sea to most considerable places in Great Britain and Ireland, and the extraordinary facility of conveyance that is thereby afforded. The general use of coal as an article of fuel in modern times, and the circumstance of London and the southern counties being almost wholly supplied from the north, has occasioned the employment of a very large number of ships and seamen. The first mention of coal in England is believed to occur in a charter of Henry III. granting licence to the burgesses of Newcastle to dig for it. In 1281 Newcastle is said to have had a considerable trade in this article. About the end of this century, or the beginning of the fourteenth, coals began to be imported into London, being at first used only by smiths, brewers, dyers, soap-boilers, &c.; this innovation was, however, loudly complained of. A notion got abroad, that the smoke was highly injurious to the public health; and in 1316 the Commons petitioned Edward I. to prohibit the burning of coal, on the ground of its being an *intolerable nuisance*. His Majesty issued a proclamation conformable to the prayer of the petition; but it being but little attended to, recourse was had to more vigorous measures; a commission of oyer and terminer being issued out, with instructions to inquire as to all who burned sea-coal within the city, or parts adjoining, to punish them for the first offence by 'pecuniary mulcts,' and upon a second offence, to demolish their furnaces, and to provide for the strict observance of the proclamation in all time to come.

But notwithstanding the efforts that were thus made to prohibit the use of coal, and the prejudice that was long entertained against it, it continued progressively to gain ground. This was partly, no doubt, owing to experience having shown that coal smoke had not the noxious influence ascribed to it, but far more to the superior excellence of coal as an article of fuel, and the growing scarcity, and consequent high price of timber. In the reign of Charles I., the use of coal became universal in London, where it has ever since been used, to the exclusion of all other articles of fuel. At the Restoration, the quantity imported was supposed to amount to about 200,000 chaldrons. In 1670, the imports had increased to 270,000 chaldrons. At the Revolution they amounted to about 300,000 chaldrons, and have since gone on increasing with the growing magnitude of the city; being, in 1750, about 500,000 chaldrons; in 1800, about 900,000 chaldrons; and at present, about 1,600,000 chaldrons.*

It may be worth while to remark, that coal is not the only article now reckoned of the highest utility, the introduction of which into general use has been violently opposed. Hops, among many others, were in this predicament. When they first began to be employed in the manufacture of beer, in the reign of Henry VIII., they were objected to on the ground that they would injure its taste and its quality. In the 'Improver Improved,' of Walter Blithe, originally published in 1649, (3rd edit., p. 240,) there is the following striking paragraph:—"Hops are now grown to be a national commodity: but it was not many years since the famous city of London petitioned Parliament against two nuisances; and these were Newcastle coals, in regard to their stench, &c.; and hops, in regard they would spoyl the taste of drink, and endanger the people. And had the Parliament been no wiser than they, we had been in a measure pined, and in a great measure starved, which is just answerable to the principles of those men who cry down all devices, or ingenious discoveries as projects, and thereby stifle and choak improvements."

The prejudice against taking interest for a loan of money, which appears to have principally originated in a mistaken interpretation of a text in the Jewish law (Deut. chap. xxiii. v. 20), exercised a powerful influence in the middle ages. In England, as in most other countries, Christians were absolutely prohibited, by the laws both of the church and state, from bargaining for interest; but as Jews, according to the Mosaic law, were allowed to lend at interest to a stranger, its exaction by them was at first connived at, and subsequently authorised by law: the same privilege being afterwards extended to the Italian or Lombard merchants. In consequence of this exemption, many Jews early settled in England, and engrossed a large share of the commerce of the kingdom. Such, however, was the contempt in which they were held, that they and their families were regarded as the slaves of the crown, by whom they were not unfrequently plundered, under the miserable pretence of punishing them for their 'hellish extortions.' To such an extent, indeed, were these oppressive practices carried, that a particular exchequer, called the *Exchequer of the Jews*, was established for receiving the sums extorted from them in fines, customs, forfeitures, tallages, &c.* In consequence they were obliged to indemnify themselves by charging an enormous interest; so that at nearly the same time that the republic of Genoa, where sounder principles prevailed, was paying from 7 to 10 per cent. interest on loans, and that bills were discounted in Barcelona at 10 per cent., we are told by Matthew Paris that the debtor in England paid 10 per cent. every two months! This, indeed, was quite impossible as a general practice; but it may not be far from the rate charged on the few loans that were then made†.

The disorders occasioned by this ruinous interference on the part of government, at length became so serious that, notwithstanding the powerful prejudice to the contrary, a statute was passed in 1646, (37th Hen. VIII. cap. 7,) legalizing the taking of interest to the extent of *ten per cent. per annum*; and this because, as is recited in the words of the act, the statutes 'prohibiting interest altogether have so little force that little or no punishment hath ensued to the offenders.' In the reign of Edward the VI. the horror against taking interest seems to have revived in full force; for in 1552 the taking of *any* interest was again prohibited 'as a vice most odious and detestable,' and 'contrary to the word of God.' But in despite of this denunciation, the ordinary rate of interest, instead of being reduced immediately, rose to 14 *per cent.*; and continued at this rate, until 1571, when an act was passed (13th Eliz. cap. 8), repealing the act of Edward VI. and reviving the act of Henry VIII., allowing 10 *per cent.* interest. In the preamble to this act, it is stated 'that the prohibiting act of Edward VI. had not done so much good as was hoped for; but that rather the vice of usury hath much more exceedingly abounded, to the utter undoing of many gentlemen, merchants, occupiers, and others, to the importable hurt of the commonwealth.' This salutary statute was opposed, even by those who, it might have been expected, would have been among the first to emancipate themselves from the prejudices of the age, with all the violence of ignorant superstition. Dr. John Wilson, a man famous in his day, and celebrated for the extent and solidity of his learning, stated in the House of Commons that 'it was not the amount of the interest taken that constituted the crime, but that all lending for any gain, be it ever so little, was wickedness before God and man, and a damnable deed in itself, and that there was no mean in this vice any more than in murder or theft!' In order to quiet the consciences of the bench of bishops, a clause was inserted, declaring all usury to have been forbidden by the law of God, and to be in its nature sinful and detestable! When first enacted this statute was limited to a period of five years, but 'forasmuch as it was by proof and experience found to be very necessary and profitable for the commonwealth of this realm,' it was in the same reign made perpetual. (39th Eliz. cap. 18.)

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* Campbell's Political Survey of Great Britain, vol. ii. p. 30. Edington on the Coal Trade, p. 41, &c.

* Madox's History of Exchequer, p. 150.

† Hallam's Middle Ages, vol. iii. p. 402.

In the 21st of James I. the legal rate of interest was reduced to 8 *per cent.* by an act to continue for seven years only, but which was made perpetual in the succeeding reign (3d Car. I. cap. 4.) During the Commonwealth the legal rate of interest was reduced to 6 *per cent.*, a reduction which was soon after confirmed by the act of 12th Car. II. And finally, in the reign of Queen Anne, a statute (12th Anne, cap. 16) was framed, reducing the rate of interest to 5 *per cent.*, at which it now stands.

No complaint was so prevalent during the reigns of the princes of the house of Tudor, as that of the increase of sheep-farming, and the decay of tillage and population. Soon after the accession of Henry VII. it was enacted, in order to arrest the progress of the supposed evil, that the owner of every house let to farm, with twenty acres of land in tillage, should be obliged under penalty of the king's incurring a moiety of the profits of such lands, to keep up such houses and buildings upon them as were required for keeping them in tillage. This law was commended by Sir Thomas More and Lord Bacon,—a striking proof, if any such were required, how little the principles of public economy were then understood. Statutes to the same effect were passed in the reigns of Henry VIII., Edward VI., Philip and Mary, and Elizabeth. They appear, however, to have had little influence. The current of circumstances could not be controlled; and lands continued to be enclosed and consolidated into larger farms, notwithstanding the denunciations of the clergy, the lamentations of patriots, and the prohibitions of the legislature.

Many attempts have been made, but seldom with much success, to explain the circumstances that led to this change in the mode of occupying land, and in the constitution of society. In point of fact, however, it was really nothing more than the necessary result of the breaking up of the feudal system. The modes in which the nobles could display their magnificence being no longer the same, money and not services came to be in demand. The foundations of the feudal system had been shaken in the reign of Edward IV., and most part of it was thrown down in that of Henry VII. The suppression of the practice of giving liveries, and of keeping large bodies of retainers constantly at command, took from the barons the principal motive that had induced them to subdivide their estates. Instead of endeavouring to excel each other in the number and boldness of their retainers, their competition was diverted into less dangerous channels—in vying with each other in the sumptuousness of their houses and tables, and the splendour of their equipages. The rude magnificence in which they formerly lived needed, with the exception of supplies of wine and a few other articles, little that was not produced at home. But this simplicity no longer sufficed. The products of foreign countries became more and more the objects of desire. To acquire the means of supporting this increased expense, the landlords began to consolidate their properties, and to turn them to the best account; and as woollen-manufactures and wool were the only great articles produced in the country that met with a ready and advantageous sale abroad, the increasing demand for foreign commodities led to a corresponding increase in the demand for woollens and wool for exportation, and the consequent extension of the sheep husbandry. Had there been any other native commodity, that would have answered better as an article for sending abroad, it would have been raised in preference. But most of our home manufactures for exportation grew up by slow degrees; and during the reign of the Tudors woollen goods and raw materials were almost the only means of traffic. Hence the extension of sheep-farming so much complained of, and the impotence of all attempts to counteract it; and hence also the decline of that system, when the country began to be more copiously supplied with other exportable articles.

So inconsequential was the legislature in its proceedings during the reign of the Tudors, that at the very period it was passing acts prohibiting the extension of tillage, and limiting the size of farms and the number of sheep an individual might keep, (25 Hen. VIII. cap. 15, &c.,) laws were actually enacted to prevent the slaughter of calves, and to increase the breed of neat cattle! (21 Hen. VIII. cap. 8, &c.) The exportation of corn was also prohibited, except when its price was ruinously low. This was evidently to destroy with the one hand what was raised up with the other. Wool was produced in preference to corn because it might be manufactured and exported, and was found, principally on that account, to be most profitable. Had the free exportation of corn been allowed, its value relatively to wool would have risen, and the advantage on the side of the former would have been reduced; but by preventing its exportation the market was glutted with corn, and the unnatural depression of its value prevented the statutes for promoting its cultivation from having any effect. The increased price of corn towards the latter part of the reign of Elizabeth, and the greater freedom of exportation that was then allowed, gave the first effectual encouragement to tillage. But we need not wonder at the contradictory policy of our ancestors. Even now it is far from being universally acknowledged that the self-interest of the producers will always lead them to employ themselves in the mode that is most advantageous; and that all legislative enactments, intended to force capital and industry into channels in which they would not naturally flow, are either useless or pernicious.

The first laws and regulations as to the support of the poor were enacted under the princes of the Tudor line. No legislative notice seems to have been taken of the poor till 1376; and their existence as a separate class was not recognized previously to the fourteenth century. The truth is, how paradoxical soever the assertion may at first appear, that we owe the origin of the poor to the overthrow of the feudal system, and the establishment of liberty and independence. For several centuries after the conquest, the mass of the inhabitants of England were in a state of predial slavery. They could not leave the lands to which they were attached; they were the property of their owners, who, though they were prohibited from killing them, might beat them with impunity. During this state of society, the poor, in the modern acceptation of the term, were necessarily unknown; for, being slaves, they could look to none but their lords for support. But after towns began to be enfranchised, and to acquire privileges, and manufactures were established, a class of independent labourers was formed; the maimed, impotent, and unemployed portion of which, having no one on whom they could fall back, became a burden on the public, and were designated *the poor*. The sudden breaking up of the feudal system under Henry VII., and the practice then so generally followed by the lords of substituting money-rents in the place of services, and of dismissing their retainers, added greatly to the numbers of the poor; these were still further augmented in the reign of Henry VIII. by the dissolution of the monasteries, which had been pretty generally in the habit of contributing largely to the support of the dependent portion of the community. Some idea may be formed of the influence of this sudden change in the condition of society from an act of Henry VIII., (3 Hen. VIII. cap. 15,) in which it is stated that 60,000 persons were then imprisoned for debts and crimes! The necessity of endeavouring, if possible, to put a stop to such disorders, led, in the reigns of Henry VII. and his successors, to different legislative measures with respect to the poor. At first, an attempt was made to provide for their wants by voluntary contributions; but this having failed, a compulsory provision was resorted to, which was perfected and completed by the famous act of the 43d of Elizabeth, which continues, to this day, the foundation of the entire fabric of the poor-laws. This is not the place to enter into any detailed examination as to the policy of this system. But it appears to us, (that is, to the writer of this article, who alone is responsible for this opinion,) after allowing liberally for its defects, to have been, on the whole, singularly advantageous. It improved the character of the poor by giving them a security against want; at the same time that it prompted the landlords, and other persons of influence, from a regard to their own interests, to take measures for checking the growth of cottages, the subdivision of farms, and the too rapid increase of the labouring class. Its influence on manufactures and commerce has, we think, been most salutary. By providing a resource for the poor in periods of national distress, or when the usual channels of employment were obstructed, it has preserved the public tranquillity unimpaired;—a condition indispensable to the full development of the national resources, and to the continued growth of capital.

We must here close these brief and desultory notices of the rise of commerce and industry in England, and of their progress down to the accession of the house of Stuart. The foundation of the colonies in America and the West Indies, and the opening of the trade to India, gave a wonderful stimulus to industry, and excited a spirit of bold and daring enterprise, which was further promoted by various circumstances, some of which, though less striking, were not, perhaps, less powerful. But as any attempt to trace the progress of commerce in England since 1600 would require an amplitude of detail quite inconsistent with the objects and limits of the present treatise, it must be deferred to some other opportunity.

The reader will observe, that we have passed very cursorily over the important subjects of the corn trade and the colonies. This was not done through inadvertence, but intentionally. The object of this treatise was to unfold principles applicable to all sorts of commercial transactions, without entering into discussions relative only to single branches. Both the subjects now alluded to are of such interest and importance, and involve so many distinctive and peculiar details, that each would require for its proper discussion a treatise not much less than this. We flatter ourselves that the *principles* according to which the trade in corn, and the intercourse with colonial possessions ought to be conducted, will be found sufficiently explained in these pages. But those who wish to go farther, who desire to be informed as to the peculiar regulations under which the corn and colony trades have been placed, and the reasonings of those by whom these regulations have been impugned and defended, must resort to publications treating exclusively of such subjects.

We intended at one time to have added to this treatise tables of the principal coins, weights and measures made use of in this and other countries; but, on reflection, we considered it better that these should be collected in a separate treatise; not only because adequate space would thus be found for the proper treatment of the subject, but that any individual might have it in his power to obtain Tables of great practical utility, without their being tacked to anything else.

We cannot better conclude this treatise than in the words of Mr. Stevenson:—'What a picture does modern commerce present of the boundless desires of man, and of the advancement he makes in intellect, knowledge, and power, when stimulated by these desires! Things familiar to use cease to attract our surprise and investigation; otherwise we should be struck with the fact, that the lowest and poorest peasant's breakfast-table is supplied from countries lying in the remotest parts of the world, of which Greece and Rome, in the plenitude of their power and knowledge, were totally ignorant. But the benefits which mankind derives from commerce are not confined to the acquisition of a greater share and variety of the comforts, luxuries, or even the necessaries of life. Commerce has repaid the benefits it has received from geography: it has opened new sources of industry; of this the cotton manufactures of Great Britain are a signal illustration and proof:—it has contributed to preserve the health of the human race, by the introduction of the most valuable drugs employed in medicine. It has removed ignorance and national prejudices, and tended most materially to the diffusion of political and religious knowledge. The natural philosopher knows, that whatever affects, in the smallest degree, the remotest body in the universe, acts, though to us in an imperceptible manner, on every other body. So commerce acts; but its action is not momentary; its impulses, once begun, continue with augmented force. And it appears to us no absurd or extravagant expectation, that, through its means, either directly, or by enlarging the views and desires of man, the civilization, knowledge, freedom and happiness of Europe will ultimately be spread over the whole globe.'

J. R. M'Culloch.

CYCLOPÆDIA OF COMMERCE.

AAM. [AHM.]

ABANDONMENT, in *Marine Insurance*, takes place in those circumstances where the insured may claim as for a total loss. The insured may abandon when, by any of the events insured against, the voyage is lost, or is not worth pursuing,—where the subject is so damaged as to be of no value to the owner,—where the salvage is very high,—where the part saved is of less value than the freight,—or where farther expense is necessary, and the insurer will not undertake to defray it. Where abandonment is accepted by the underwriters, or a total loss paid for, a subsequent recovery will not give a right to revoke the transaction. The insured is in no case bound to abandon. In France, Spain, and Holland, the time for giving notice of abandonment is limited by law: in Britain it depends on circumstances. Where the insured receives intimation of a total loss, he must communicate his election to the underwriter without delay. He is entitled to a reasonable time for ascertaining the state of the case, but must not treat it in the first instance as a partial loss, and abandon on finding his choice disadvantageous. The underwriter, if he object to the abandonment, must give timely notice. [INSURANCE (*Marine*). LOSS.] (*Park*, 228-282. *Marshall*, 563-627.)

ABBREVIATION, the contraction of a word or phrase, made either by omitting some of the letters, or by substituting certain characters in their place. Abbreviations were anciently much employed in order to save the labour of copying; and even after the invention of printing, they continued so prevalent, and in some cases became so unintelligible, that Parliament at last restrained their use in legal documents. A few of those most frequently used in commerce, and for general purposes, are subjoined:—

A. D. the year of our Lord
A. C. the year of Christ
B. C. before Christ
A. M. the year of the World
A. H. the year of the Hegira
O. S. Old style
N. S. New style
A. M. Forenoon
P. M. Afternoon
Xmas. Christmas
Ult^{o}. the last month
Ins^{t}. the present month
Prox^{o}. the next month
m/d Months after date
d/s Days after sight
d/d Days after date
Ditto or do. the same
Dr. Cr. Debtor, creditor
E. E. Errors excepted
I. O. U. I owe you
F^{o}. folio

No. Number
Co. Company
i. e. that is to say
P. S. Postscript
L. S. the place of the seal
MS. Manuscript
N. B. Observe
E. G. for the sake of example
N. E. S. W. North, east, south, west
E. I. C. East India Company
E. I. C. S. East India Company's Service
N. B. North Britain
W. I. West Indies
U. S. United States
H. B. M. Her Britannic Majesty
H. M. S. Her Majesty's ship
J. P. Justice of Peace
W. S. Writer to the Signet
C. E. Civil Engineer

°/o per cent.
£ or L. Pound
S. D. Shillings and pence
F. or qt. Farthings
$\$$ or D. Dollars
$\$$ Milreas
fr. c. Francs and cents
S^{a}. R^{s}. Sicca rupees
A. R. P. Acres, roods, poles
Cwt. Qr. lb. Hundredweight, quarter, pound
Oz. dwt. gr. Ounce, pennyweight, grain
Hhd. bar. pun. Hogshead, barrel, puncheon
Gal. qt. pt. Gallon, quart, pint
Qr. bu. pk. Quarter, bushel, peck
Yd. ft. in. Yard, foot, inch
° ′ ″ Degrees, minutes, seconds
[LLOYD'S.]

ACCEPTANCE OF A BILL, is an engagement on the part of the drawee to pay the bill, in full, if the acceptance is unlimited. According to the usual practice, the acceptor signs his name beneath that of the drawer. Though no condition can be appended by the drawer of a bill, it may by the acceptor, and he will not be responsible till the condition be fulfilled. The holder is not bound to take a conditional acceptance, but if he do so, he will be held to have made his election. To preserve the responsibility of drawers and indorsers entire, notice of a condition to an acceptance should be immediately sent them. By 1 and 2 Geo. IV. c. 78, the acceptance of inland bills must be in writing on the bill. This applies to bills which are both drawn and accepted within any one of the three divisions of the empire. A similar rule applies to all bills, whether foreign or inland, in Scotland. Foreign bills in England and Ireland may be accepted verbally, or by a writing apart. A notification that the bill has "been presented" or "seen," or a statement that "it shall meet with due honour," is sufficient. By custom, the drawee is allowed twenty-four hours, or till next day, to consider whether he shall accept, unless the post leave in the interim. If acceptance be refused or delayed, a protest should be taken, —in any part of the empire in the case of a foreign bill, and in Scotland in the case of either an inland or foreign bill; and notice should immediately be transmitted to any party liable, intimating the non-acceptance, and that recourse is to be had against him. In Scotland, though acceptance must be made by signature on the bill to give it the legal privileges, an action against the drawee may be grounded on a separate engagement to accept, especially if a third party has advanced money on it; and if the drawee has funds of the drawer in his hands, presentment and protest for non-acceptance with notice, will operate as an assignation of them. [ASSIGNMENT.] Acceptance cannot be withdrawn after the bill is returned to the holder.

A bill may be accepted by procuration, but the holder is not bound to take such acceptance, unless a clear and express authority from the principal be produced. Acceptance is held a recognition of the drawer's signature, so as to preclude the acceptor from pleading against an onerous holder that it is forged; but it is not held an admission of an indorser's signature, though the acceptor must be considered bound to notice any condition attached to an indorsement. In England, a collateral undertaking may be constituted by a second acceptance, that is, an engagement to pay the bill if it is not honoured by the first acceptor. In Scotland, a second acceptor is primarily liable with the first, and thus one who signs a bill with a view of being a cautioner merely, will be liable as a principal acceptor. The payee, by accepting, transfers the debt from the drawer's shoulders to his own: he is thenceforth considered the party liable; and after the bill is in circulation, when it is paid, it is presumed to be with the acceptor's funds. Although the bill were not drawn for value, the acceptor is presumed to have had value for it, and he can only redargue the presumption by evidence, which in Scotland must be written, unless it be admitted by the party on oath that there was no value.

Acceptance for Honour or *Supra Protest* is an engagement to pay the bill if not paid by the drawee, entered on after it is protested against the latter for non-acceptance. It is performed by a party who professes to be under no obligation to accept, and for the purpose of preventing the bill from being returned dishonoured. It may be by a third party, in the absence of, or on the refusal of the drawee, or it may be by the drawee himself, who refuses to accept the draft of the drawer, but accepts for the honour of an indorser. The drawee may even refuse to accept the bill absolutely, and may then, after protest, accept for honour of the drawer. The acceptor for honour only renders himself liable in a recourse, in case of non-payment by the proper party, and so the bill should be presented to the drawee for payment when it falls due, notwithstanding his refusal to accept it. The acceptor for honour has recourse against the person for whose honour he has accepted, and succeeds to whatever claim that person may have against the drawee. (*Bayley on Bills*, 171-215. *Chitty on Bills*, 307-383. *Thomson on Bills*, 329-368.) [ACCOMMODATION BILL. BILL. NOTICE. PRESENTMENT. PROTEST.]

ACCOMMODATION, a significant term applied by merchants to the credit fabricated by means of a bill of exchange, drawn solely for the purpose of being discounted, and not sanctioned by an actual sale of goods. Such a bill is called an *accommodation bill*, also a *wind bill*, a *kite*, or a *fictitious bill*. Accommodation bills are of various kinds. The following description of one may suffice:—A being in want of £100, requests B to accept a bill drawn at two months, which B therefore, on the face of it, is bound to pay; it is understood, however, that A will take care either to discharge the bill himself, or to furnish B with the means of paying it. A obtains ready money for the bill on the joint credit of the two parties. A fulfils his promise of paying it when due, and thus concludes the transaction. In general, accommodation bill transactions are carried on for the joint benefit of the parties, by means of *cross acceptances*, or bills mutually drawn, accepted and exchanged; and where two names are not enough, others are obtained sufficient to give currency to the bills. The payment of these bills is, among needy men, provided for by their again reciprocally drawing upon each other; and this is repeated until the system of expedients failing, bankruptcy sooner or later overtakes the principal parties, and, not unfrequently, all who are brought within the circle of their operations. The loss of credit which the use of accommodation paper, when once perceived, generally occasions,—the expense of stamps, and higher rates of discount, and particularly the double liability for the sums for which cross acceptances are given, should deter the respectable merchant from having recourse to this dangerous expedient. But it must be admitted, at the same time, that where, from some unexpected event, or commercial revulsion, a merchant is unable to bring his commodities to a fair market so as to meet his payments, his credit may be saved by the temporary assistance of friends, through the medium of bills, and he may be enabled to hold his goods till some proper opportunity of sale presents itself; and (although such contingencies cannot be too anxiously guarded against) there are perhaps few who have transacted business long and extensively, who have not, at particular times, received support in this way.

It is sometimes said that real bills represent real capital, while accommodation bills are a species of false and delusive wealth, which supply only an imaginary capital; but this supposition, Mr Thornton remarks, is "one by which more than justice is done to one of these species of bills, and something less than justice to the other." "The notes given in consequence of a real sale of goods cannot be considered as on that account *certainly* representing any actual property. Suppose that A sells £100 worth of goods to B at six months' credit, and takes a bill at six months for it; and that B, within a month after, sells the same goods at a like credit to C, taking a like bill, and again that C, after another month, sells them to D, taking a like bill, and so on; there may then, at the end of six months, be six bills of £100 each existing at the same time; and every one of these may possibly have been discounted. Of all these bills, then, one only represents any actual property." "In order to justify the supposition that a real bill (as it is called) represents actual property, there ought to be some power in the bill-holder to prevent the property which the bill represents from being turned to other purposes than that of paying the bill in question. No such power exists; neither the man who holds the real bill, nor the man who discounts it, has any property in the specific goods for which it was given: he as much trusts to the general ability to pay of the giver of the bill, as the holder of any fictitious bill does. The fictitious bill may, in many cases, be a bill given by a person having a large and known capital, a part of which, the fictitious bill may be said, in that case, to represent."

"We come next to some points in which they differ. First, The fictitious note, or note of accommodation, is liable to the objection that it professes to be what it is not. This objection, however, lies only against those fictitious bills which are passed as real. In many cases, it is sufficiently obvious what they are. Secondly, The fictitious bill is in general less likely to be punctually paid than the real one. There is a general presumption that the dealer in fictitious bills is a man who is a more adventurous speculator than he who carefully abstains from them. It follows, thirdly, That fictitious bills, besides being less safe, are less subject to limitation as to their quantity. The extent of a man's actual sales forms some limit to the amount of his real notes; and as it is highly desirable in commerce, that credit should be dealt out to all persons in some sort of regular and due proportion, the measure of a man's actual sales, certified by the appearance of his bills, drawn in virtue of those sales, is some rule in the case, though a very imperfect one in many respects."

"A bill of accommodation is evidently in substance the same as any common promissory note; and even better, in this respect,—that there is but one security to the promissory note, whereas, in the case of the bill of accommodation there are two. So much jealousy subsists lest traders should push their means of raising money too far, that paper, the same in its general nature with that which is given, being the only paper which can be given by men out of business, is deemed somewhat discreditable when coming from a merchant." "Bills of exchange are drawn upon London to a great amount, from all parts, not only of Great Britain, but of the world; and the grounds on which they have been drawn in a great degree elude observation. A large proportion of them, no doubt, partakes of the nature of bills of accommodation. They have, however, in general, that shape communicated to them, whatever it may be, which is thought likely to render them discountable; and it is not difficult to make use of some real, and, at the same time of many seeming transactions of commerce, as a ground for drawing, and as a means of multiplying such bills." The operation of drawing and redrawing bills may obviously be carried on betwixt merchants in London and others abroad, "partly for the purpose of raising money, and partly for that of profiting by a small turn in the exchange. Transactions which are the converse to this, are on the other hand entered into by those who happen to possess ready money. They remit, if the exchange seems to favour their remittance, and draw in consequence of having remitted. To determine what bills are fictitious or bills of accommodation, and what are real, is often a point of difficulty. Even the drawers and remitters themselves frequently either do not know, or do not take the trouble to reflect whether the bills ought more properly to be considered as of the one class or of the other; and the private discounter or banker to whom they are offered, still more frequently finds the credit of the bills to be the only rule which it is possible to follow in judging whether he ought to discount them." (*Thornton on Paper Credit*, c. 2.)

Law as to Accommodation Bills.—These documents differ in no respect from the form of ordinary bills: their legal effect, however, is different as respects parties between whom they do not represent a real debt. The drawer is generally the person accommodated, the acceptor not being indebted to him, but merely putting his name on the bill, to give it currency in the market;—if he have to retire it, therefore, the drawer becomes his creditor. That the paper is merely an accommodation bill, as between any two parties who appear on it, cannot, however, be a defence against a third who has given value for it, and even though he knew it to be an accommodation bill when he took it, he has the ordinary means of obtaining payment. A person who appears as debtor on a bill or note, is always presumed to have had value, and in a question with the immediate creditor, he must prove want of value by evidence; in Scotland, the evidence must be writ or oath. In a purely accommodation bill, the drawer is not entitled to notice of dishonour, the use of notice being to enable the drawer to take precautions for his safety and indemnification, if he has funds in the drawee's hands; but it can never be safe to omit notice, for if the drawer had at any time, from the period of drawing to that of acceptance, funds in the drawee's hands, he is entitled to notice. [BILL. ACCEPTANCE. NOTICE.]

ACCOUNT, a term applied generally to a computation, reckoning, or statement of any thing by numbers.

ACCOUNT-CURRENT is a statement of the transactions betwixt two parties, drawn out chronologically in a plain circumstantial manner, and disposed in the form of debtor and creditor on opposite pages.

ACCOUNT SALES is a document giving a detailed statement of the sale of goods. It exhibits the quantities and values of the goods sold, the attendant charges, and the net proceeds.

ACCOUNT OF CHARGE AND DISCHARGE in some respects resembles an account-current, but differs considerably in form, as instead of charging the several sums at the time they are received, the whole articles with which the party is intrusted are charged at once on one side, while the other side, or discharge, shows the manner in which he has accounted for the same. "The system of accounting by charge and discharge is the old exchequer practice, a remnant of the times when the only accounting parties were debtors to the king, or stewards and bailiffs to their lords; and the system is applicable only to accounts of a similar nature; such as debtors to their creditors, agents to their principals, trustees to their *cestui que* trusts, or the like; in all which, one party only is the accountant, and the other a creditor." (*Cory on Accounts.*)

Merchants usually prefix the initials E. E. (for *Errors Excepted*) to their signature to accounts; but the omission of these letters forms no bar to the subsequent correction of errors.

Cross accounts, when of long standing and complicated, are fruitful sources of disputes. In England, such disputes are either referred to arbitration, or made the subject of a bill in Chancery. One fifth at least of the business of that Court is accounts, the ordinary duties connected with which are performed by twelve officers called "Masters in Chancery." In Scotland, where arbitration is less frequent, and where there is no establishment of particular persons for the purpose of settling disputed accounts, the business is in general left to the ordinary courts, by whom (or by the parties, subject to their approval) a person is selected from the practising accountants to investigate and report upon the details. [BOOK-KEEPING. BOOK-DEBT.]

ACETIC ACID, formerly called *radical vinegar*, is the sour part of vinegar, and that to which its peculiar and valuable properties are owing. It is obtained, 1*st*, By the fermentation of saccharine matter. 2*dly*, By the distillation of wood. The product of the former constitutes, when diluted, the common vinegar, which abroad is made from wine, and in this country from an infusion of malt, termed *wort*. Revenue proof vinegar, termed by the maker No. 24, is calculated to contain 5 per cent. of pure acetic acid. Sp. gr. 1·0085. The acetic acid from wood is obtained by the destructive distillation of the dried branches of trees in hollow iron cylinders. The hard woods, such as oak, ash, birch, and beech, are alone used; and the average product of crude acid from 8 cwts. of wood is 35 gallons. This acid, formerly called *pyroligneous acid*, is now largely employed, when purified, for almost all the purposes to which acetic acid or common vinegar is applied. Acetic acid, when pure, is fluid (except at a low temperature, when it crystallizes), volatile, and colourless, of an exceedingly pungent smell, and very acid taste. In this state it is used in chemical investigations. In a less pure state, it is employed for preparing acetate or sugar of lead, acetate of copper or verdigris, and acetate of alumina, largely used by calico-printers and dyers as a mordant. In the form of pyroligneous acid it is employed to preserve meat, and in the state of vinegar it is applied to a variety of purposes too well known to require notice. (*Brande's Chemistry, &c.*) Acetic acid is frequently contaminated with sulphuric acid, which, however, is readily detected by the addition of the acetate or sugar of lead, when an insoluble sulphate is precipitated should any sulphuric acid be present. [VINEGAR.]

ACIDS, a most important class of chemical compounds. According to Dr Ure, they are distinguished by the following general properties:—1. Their taste is for the most part sour; and in the stronger species it is acrid and corrosive. 2. They generally combine with water in every proportion, with a condensation of volume and evolution of heat. 3. With a few exceptions, they are volatilized or decomposed at a moderate heat. 4. They usually change the purple colours of vegetables to a bright red. 5. They unite in definite proportions with the alkalis, earths, and metallic oxides, and form the important class of *salts*. This may be reckoned their characteristic and indispensable property. There is, however, no single acidifying principle, nor absolute criterion of power among the different varieties. Acids are derived from all the kingdoms of nature, and except in the few particulars above named, they vary greatly in their properties. Some are gaseous in form, others are fluid or solid. Most of them are colourless; some are inodorous; while others are pungent. The most important, in a commercial point of view, are the Acetic, Benzoic, Boracic, Citric, Gallic, Muriatic, Nitric, Nitro-muriatic, Nitrous, Oxalic, Prussic, Sulphuric, Sulphurous, and Tartaric; an account of which will be found under these several heads.

ACKER WOOD, a fancy wood of a cinnamon colour.

ACORUS, OR SWEET FLAG, a medicinal plant (*Calamus aromaticus*), found in moist situations in many parts of Europe and Asia. It was formerly imported from the Levant, but is now obtained equally good from marshes near Norwich. It is slightly aromatic, and is occasionally used as a stimulant. The part employed is the dried creeping stem, improperly termed root, which should be chosen tough, cleared from fibres, and free from worms—to which it is very subject.

ACQUITTANCE. [RECEIPT.]

ACRE, a measure of land. The imperial standard acre contains 4 roods, 160 square perches, 4840 square yards, or 10 square chains; and 640 acres make 1 square mile. 1 Scots acre = 1·2612 imp. acre; or 134 Scots acres = 169 imp. acres nearly. 30¼ Irish acres = 49 imp. acres. 1 imp. acre = ·4047 French hectare; or 42 acres = 17 hectares nearly.

ACTS OF BANKRUPTCY, in the law of England and Ireland, are those acts or events which the law takes as a criterion that a tradesman is bankrupt. "Acts of bankruptcy," says Lord Henley, "may be divided into two classes: 1*st*, Those acts which, being in themselves indifferent or equivocal, derive their character from the intent with which they are done; and, 2*d*, Those which are in themselves substantive acts of bankruptcy, and where the intent is perfectly immaterial" (17). Those of the first class are ranged in the bankrupts' act (6 Geo. IV. c. 16, § 3) as follows: 1*st*, "If any such trader shall depart this realm, or, 2*d*, being out of this realm, shall remain abroad." The departure, or remaining abroad, must be with the intent of delaying creditors, and, if the intent is not shown, the fact that they have been delayed is immaterial. "As where one goes abroad to avoid a criminal process, or a writ *de excommunicato capiendo:* or a process to enforce a duty, as a decree to execute a conveyance: or if he goes abroad with the knowledge and consent of his creditors" (*Henley's B. L.* 17). "In some cases where the trader has gone abroad, under circumstances which render it highly improbable that he would return to this country, *ex gr.* where he had committed murder, it will be inferred that he must have intended to delay his creditors, such being the necessary consequence of his behaviour" (*Smith's Mercantile L.* 472). The alternative act of remaining abroad was inserted in the last statute to prevent one who had gone abroad with different views, from remaining absent, on hearing that his affairs were embarrassed, without being liable to the consequence of having committed an act of bankruptcy; 3*d*, "or depart from his dwelling-house." Here, as in the former case, the intent to delay is the material circumstance, and where a creditor left his house, though under a false apprehension that officers who called had authority to arrest him, when they had not, it was an act of bankruptcy (*Exp. Bamford*, 1808; 15 *Vesey*, 449); 4*th*, "or otherwise absent himself." This embraces most of those attempts to keep out of the way of a creditor, which do not come within the previous more narrow definitions. The intent to delay is necessary. The absenting does not require to be from the dwelling-house, or even the principal place of business. "A trader," says Mr Smith, "may commit an act of bankruptcy, by absenting himself from his own regular place of business, in which a man would be expected to be, or from some other place where he expected to meet those to whom he was indebted; for instance, the Royal Exchange, in order to delay his creditors. But the mere fact of a trader's absenting himself from a place at which, though he had once transacted business there, it did not appear that he had any business to transact at the time of his staying away from it, and at which, therefore, he would not, in the ordinary course of things, be expected to be present, will not warrant a jury in concluding that he had committed an act of bankruptcy, by absenting himself, in order to delay creditors. But no case, it is said, has yet gone the length of deciding that where the appointment was to meet a creditor at his, the creditor's, and the debtor breaks that appointment, such conduct amounts to an act of bankruptcy" (473). 5*th*, "Or begin to keep his house," that is, if he begin to seclude himself, so as to prevent his creditors from communicating with him, as, by retiring from his shop to his parlour, or by closing the doors and windows of his place of business. Formerly the only admitted evidence of keeping house, was proof of directions to deny access to a creditor, and of access denied accordingly. The seclusion may now, however, be shown by other unequivocal facts, and it is not necessary when a direction to deny access is proved, to prove that it was obeyed. Where the conduct of the individual is, however, otherwise equivocal, evidence of denial will be required. Where a trader bade his servant tell any creditor who might call that he was not at home, and on a creditor calling he was so told, though the debtor was at home and ill, and might have validly excused himself on that ground, it was laid down that a jury might find it to be an act of bankruptcy (Lazarus *v.* Waithman, 1821 ; 5 *Moore* 313). On the other hand, if a creditor is simply denied access, the circumstance may be explained away on the ground of illness or engagement. "A mere direction by a trader to deny him to a creditor, if he do no further act indicative of keeping house, such, for instance, as secluding himself, is not, *per se*, an act of bankruptcy : neither, on the other hand, is a denial, if he did not order it" (*Smith's Mercantile L.* 475). A denial in a friend's house, or on board a ship, may be an act of bankruptcy. A denial on a Sunday was held not to be so, though that day had been agreed on between the debtor and creditor for settling the account (*Exp. Preston*, 1813; 2 *V. and B.* 311).

6th, "Or suffer himself to be arrested for any debt not due ;" *7th*, "or yield himself to prison ;" *8th*, "or suffer himself to be outlawed ;" *9th*, "or procure himself to be arrested ;" *10th*, "or his goods, money, or chattels, to be attached, sequestered, or taken in execution ;" *11th*, "or make, or cause to be made, either within this realm or elsewhere, any fraudulent grant or conveyance of any of his lands, tenements, goods, or chattels, or make or cause to be made any fraudulent surrender of any of his copyhold lands or tenements, or make or cause to be made any fraudulent gift, delivery, or transfer, of any of his goods or chattels." Deeds of the description here enumerated are divided into two kinds : 1*st*, "those which are void at common law, or under the statute of fraudulent conveyances, 13 Elizabeth, c. 5 ; and 2*d*, those which are considered fraudulent, as being in contravention of the policy of the bankrupt law, either by adopting a mode of distribution of the insolvent's property, different from that which the bankrupt law points out, or (which will embrace the consideration of the second of the above acts of bankruptcy) by being a preference of one or more creditors in fraud of the others" (*Henley's B. L.* 26). Those of the former kind are frauds in their own nature. The other class consists of acts, which, were they not performed by a trader, would not be held as frauds. These are, 1*st*, *an assignment or disposal of the whole of the trader's property*. Although the rule contemplated the defrauding of creditors by such an act, yet it is not the less an act of bankruptcy, though made in favour of the creditors themselves as a body. But the advantages of deeds of composition having been experienced for some time in Scotland, the rule was restricted by 6 Geo. IV. c. 16, § 4, which enacts, that a trust-deed for the benefit of all the creditors of a trader, shall not be considered an act of bankruptcy, unless a commission or *fiat* issue within six months. [COMPOSITION CONTRACT.] A creditor who has executed or been privy to, or has acted under, a general conveyance to creditors, cannot afterwards challenge it as an act of bankruptcy. The character of the act, it has been held, is not saved by the circumstance that the deed is only to be executed on certain conditions, as, if the trustees think fit, or if a commission of bankruptcy do not issue within a certain time. An exception of a very small portion of his property will not save a general disposal of a trader's effects from being an act of bankruptcy. The second kind of disposal contrary to the spirit of the bankrupt laws is one giving an unfair preference to any particular creditor. A merchant in solvent circumstances is always entitled to follow his own choice in the routine in which he may pay his creditors, and therefore it is only when it is done in contemplation of bankruptcy, and with the view of making an unequal distribution of the estate which is to become bankrupt, that such a preference constitutes an act of bankruptcy. It does not appear that the act will be one of bankruptcy however closely bankruptcy follow it, unless it was contemplated. Thus, where one purchased goods on October 8, for exportation, but finding that he must stop payment, and could not make use of the goods, returned them on October 16, and stopped payment next day, but expected, that, as he had to receive remittances from abroad which would enable him to pay in full, his creditors would give him time, but they refusing, he was made bankrupt on November 2 ; this was held not to be an act of bankruptcy (Fidgeon *v.* Sharp, 10th May 1814, 1 *Marsh.* 196). To constitute an act of bankruptcy, the assignment must be voluntary. "Therefore a payment or delivery under the threat or apprehension (however unfounded) either of a criminal or civil process is valid : or where the trader acts from the mere importunity of the creditor, or, as in Smith *v.* Payne (6 *T. R.* 152), where the creditor knowing it was in vain to ask for money, pressed the trader to let him have goods to the amount of his debt" (*Henley's B. L.* 33).

The following are the acts of bankruptcy which possess that character independently of the intention of the bankrupt: 1*st,* Where a trader arrested for debt, or on any attachment for non-payment of money, lies in prison twenty-one days on that or any other similar commitment, or having been arrested for any other cause lies for twenty-one days in prison after a detainer of debt is lodged against him and not discharged (6 Geo. IV. c. 16, § 5). "The debt must be a real subsisting *legal* debt; a mere equitable demand is not sufficient; a penalty due to the crown is" (*Smith's Mercantile L.* 486). The day of arrest is included in computing the period which is not considered as completed until the expiry of the last of the twenty-one. In case of bail, the time is computed from the date of surrender in discharge of it, "unless the surrender were merely *pro forma,* the defendant never having been out of custody since the arrest, in which case the time runs from the arrest, as it will, if he have, in consequence of sickness, been kept part of the time at his own house, or have had the benefit of day rules during the period. But where he had been suffered to go at large after the arrest, the time was computed from his return into custody" (*Ib.* 486). 2*d,* Escaping from an imprisonment of the above character. The escape must not be constructive, but real. 3*d,* A trader may voluntarily become bankrupt by filing in the secretary of bankrupts' office a declaration of insolvency, attested by an attorney or solicitor. A memorandum issued from the office then becomes a warrant for advertising the bankruptcy in the Gazette. No fiat, however, can issue on the act beyond two calendar months after insertion of the advertisement, or if the advertisement have not been inserted within eight days after the filing of the declaration (6 Geo. IV. c. 16, § 6). By the immediately following section it is enacted, "That no commission [Fiat] under which the adjudication shall be grounded on the act of bankruptcy, being the filing of such declaration, shall be deemed invalid by reason of such declaration having been concerted or agreed upon between the bankrupt and any creditor or other person." 4*th,* Compounding with the petitioning creditor, *i. e.* paying to the person who struck the docket, or enabling him to obtain a larger proportion of dividend than the other creditors. The favoured creditor forfeits his debt, and must refund.

By the act for partially abolishing imprisonment for debt, and for the relief of insolvent debtors (1 & 2 Vict. c. 110), the filing of a petition for discharge, under the act by a person in actual custody, is an act of bankruptcy from the date at which he took that step, and if a *fiat* be taken out before the time appointed by the court and advertised for the hearing of the petition, or if it be taken out within two months after the date at which the order to that effect was issued by the court, the provisional assignee in terms of the act is divested, but not otherwise (§ 39). By the same statute, it is an act of bankruptcy, if a creditor or creditors, to the amount requisite to authorize a petition for bankruptcy, having filed affidavits of their debts in the court of bankruptcy, the debtor do not pay them, or find security within twenty-one days (§ 8).

Act of Bankruptcy by a Member of Parliament.—By 6 Geo. IV. c. 16, § 9, If a member of parliament who is a trader commit any of the acts which are acts of bankruptcy in the case of ordinary traders, a commission may issue in the usual manner, but the member is not liable to arrest. By § 10, a creditor or creditors of the legal amount [BANKRUPTCY] may file affidavit of the debt in any of the courts at Westminster, and sue out a summons, with a copy of which the member of parliament may be served; and if he do not satisfy the creditor by payment or compounding, or enter into a bond with two sureties to pay any sum that may be recovered against him with costs, and enter appearance to the action within one calendar month after service of the summons, an act of bankruptcy is committed by him. By § 11, if a trading member of parliament disobey any order to pay money in the course of an action in a court of equity, the creditor may apply to the court to fix a peremptory day for the payment, and if the debtor, being served with the order eight days before the day appointed for payment, neglect to pay, he is to be held as having committed an act of bankruptcy from the time of service.

IN IRELAND by the bankrupt statute 6 Wm. IV. c. 14, § 19-27, the acts of bankruptcy of the English statutes 6 Geo. IV. c. 16, are enacted there, with this addition to the act marked above as No. 11, that the words "situate in England or Ireland or elsewhere" follow the words "or make or cause to be made any fraudulent surrender of any of his copyhold lands or tenements." [ASSIGNEES. BANKRUPTCY. COMMISSIONERS.]

ADAMANTINE SPAR, OR COMMON CORUNDUM STONE, is, with the exception of diamond, the hardest substance known. Sp. gr. 4. It contains about 90 per cent. of alumine, with a little iron and silica, and is generally of a pale gray or greenish colour, but sometimes of red and brown tints. It is found in India, China, and in some parts of Europe. The Indian variety is considerably whiter than the Chinese, and is usually deemed the purest. In the East it is used for polishing steel and cutting gems, but the European lapidaries prefer diamond powder.

ADEN, a seaport of Arabia, lying in 12° 52′ N., 44° 59′ E. about 100 miles E. of the entrance to the Red Sea. It was acquired by the East India Company in the year 1838, partly to facilitate the steam-navigation of that sea. The town is advantageously situated upon a noble promontory, which forms two bays, in the westernmost of which, or "Back Bay," a place has been selected for the formation of a coal depôt. This bay is accessible and sheltered, and at low water is nearly twenty feet in depth, within about thirty yards from the shore.

Aden was formerly the most opulent city in Arabia; and during the twelfth, thirteenth, and fourteenth centuries, was an important emporium in the European trade with India. It afterwards declined; and latterly, the town and its once imposing fortifications have been nearly a heap of ruins, inhabited by a miserable population of 600, composed of Jews, Banians, Arabs, and Samalkies. Under the protection of the Company, however, there can be little doubt that it will again acquire much of its former consideration. Its local position and harbour give it a decided advantage over the ports of the Red Sea, by enabling vessels to perform several trips to and from India during the year; whereas the nature of the winds within the Straits of Bab el Mandeb are such, that more than one can seldom, if ever, be effected by a native vessel. The monopolizing spirit of the Egyptian government, at present, operates unfavourably upon British commerce with the countries adjoining the Red Sea; but it is considered likely, notwithstanding, that the rich products of Abyssinia, and of the neighbouring parts of Africa, consisting of gold-dust, ivory, coffee, gums, frankincense, hides, and sheep, will soon find their way to Aden, to form a return for the silks, cotton piece-goods, iron, and rice, which will be imported from Britain and India. To facilitate the sale of British and Indian goods throughout Arabia, it fortunately happens that the road leading to the interior is the nearest to the richest part of Yemen, and from which the celebrated coffee can be more easily conveyed to Aden than to Mocha. At present, it is the chief mart for the gums brought from Africa by the Somaulies.

ADJUSTMENT, in *Marine Insurance*, a calculation of the sums to which the insured is entitled from the respective underwriters, on a loss occasioned by any of the risks insured against, generally prepared by a professional person, indorsed on the policy, and signed by the several underwriters. It is compared to a note of hand, being presumptive against them, and not requiring the consideration to be proved by the holder, but admitting of a valid defence being raised and proved by the underwriter. [INSURANCE (*Marine*). LOSS. POLICY.]

ADMEASUREMENT. [TONNAGE.]

AD VALOREM (*Lat.*), according to the value. This term is used in commerce chiefly in reference to those duties (hence called *ad valorem duties*), which are levied on commodities at certain rates *per cent.* on their value.

ADVANCE commonly denotes money paid on the security of property consigned or deposited. Merchants frequently advance from one-half to two-thirds of the value of goods consigned to them on receiving invoice, bill of lading, &c. [BILL. PRINCIPAL AND AGENT. SALE. PROOF IN BANKRUPTCY, &c.]

ADVENTURE, a term sometimes used to express a shipment by a merchant on his own account. A *joint adventure* is where the shipment is made by two or more parties on joint account. [JOINT ADVENTURE.]

ADVERTISEMENTS in any newspaper, periodical, or literary work, are each subject to a stamp-duty of 1s. 6d., when printed and published in Great Britain; and of 1s. in Ireland. 3 & 4 Wm. IV. c. 23 (June 28, 1833). The revenue derived from advertisements amounted in 1839 to £125,026; of which, England, £101,357; Scotland, £13,928; Ireland, £9741.

One copy of every periodical or literary work (not being a newspaper), containing any advertisements liable to stamp-duty, published within London, Edinburgh, or Dublin, or within twenty miles, shall, within six days after publication, be brought, together with all advertisements printed therein or published, or intended to be published therewith, to the nearest head stamp-office; and the title thereof, and the name of the printer and publisher, with the number of advertisements; and the duty shall be there paid; and one copy, &c. in any place not within the above limits, shall, within ten days, be brought to the head distributor of stamps in the district, and to whom the duty shall be paid. Penalty for neglect £20. § 3. By 6 & 7 Wm. IV. c. 66, a penalty of £50 is imposed on persons advertising foreign or other illegal lotteries.

ADVICE, in commercial language, means information communicated *by letter*. The term is used chiefly in reference to bills of exchange.

"Bills are sometimes made payable 'as per advice;' at other times, 'without further advice,' (*Poth. pl.* 36, 169); and generally without any of these words. In the former case the drawee may not, but in the latter he may, pay before he has received advice." (*Chitty on Bills.*) [NOTICE.]

ADULTERATION is the deceitful mixture with any commodity of substances of a different or baser nature. Adulteration is a fraud at common law. There are, however, statutes which afford a remedy in the greater number of cases; and it is most expedient to proceed under these, more especially when they vest a summary jurisdiction in justices of the peace or other subordinate authorities. A full account of the statutes will be found in "Burn's Justice of the Peace."

AFFIDAVIT, a statement of the truth of a fact, given on oath, for which, since the passing of 5 & 6 Wm. IV. c. 62, declarations have been in several instances substituted. An affidavit must be made before some one who has authority to take it. When in reference to a suit in court, it ought to be made before the court in which the cause lies, or a commissioner authorized by it, and so an affidavit before a Master in Chancery will not be effectual in the Queen's Bench, and *vice versâ*. Affidavits are generally used to certify the service of process, or some other procedure in a court of justice, or in support of motions, or in opposition to them. The first step preparatory to an adjudication of bankruptcy, is for the petitioning creditor to make affidavit of the amount of the debt, and of his belief that the debtor has become bankrupt; and affidavits are otherwise extensively employed, in the bankrupt codes of the three kingdoms. By 5 & 6 Wm. IV. c. 62, § 13, it is unlawful "for any justice of peace, or other person, to administer, or cause, or allow to be administered, or to receive, or cause, or cause or allow to be received, any oath, affidavit, or solemn affirmation, touching any matter or thing whereof such justice, or other person, hath not jurisdiction or cognisance, by some statute in force at the time being." The illegality is not to apply to oaths, connected with the preservation of the peace and the punishment of delinquents, or with proceedings before parliament, or with the requisites for the validity of deeds to be used in foreign countries. By § 2 of the statute just quoted, various public officers are enumerated, in the business of which declarations may, by authority of the Treasury, be substituted for oaths and affidavits. By § 11, a declaration is substituted for an oath in taking out a patent.

Affidavits are not indigenous to the law of Scotland, and hence voluntary affidavits before judges are not evidence unless appointed by the bankrupt and other statutes.

Form of Deposition to prove a debt in an English Bankruptcy.

At the Court of Bankruptcy,
London, 3d January 1840.

A B being sworn and examined, the day and year, and at the place above mentioned, upon his oath saith, that C D, the person against whom this prosecution of bankruptcy is awarded and issued, was at and before the date and suing forth of the same, and still is justly and truly indebted unto this deponent [and E F, his partner], in the sum of £100 [*in words*], for goods sold and delivered, for which said sum of £100, or any part thereof, he, this deponent, hath not [nor hath his said partner], nor any other person, to his [their] use, to his knowledge or belief, received any security or satisfaction whatsoever. A B.

Form of Affidavit to the verity of a claim under a Sequestration in Scotland.

At Edinburgh, the third day of January, eighteen hundred and forty years.

In presence of A, one of her Majesty's Justices of the Peace for the city of Edinburgh, appeared B [*or* "B, one of the partners of B & Co." *as the case may be*], who being solemnly sworn, depones, that C is justly indebted, and resting owing, to him [*or* "to the company of which the deponent is a partner"], the sum of £100 [*in words*], according to the account hereto annexed. Depones that no part of the said sum is paid or compensated, nor does the deponent [*or* "nor does the deponent, or any of the partners of the said company"] hold any other person than the said C bound for the debt, or any security for the same, or any part thereof [except as stated in said account, *or as the case may be*]. All which is truth, as the deponent shall answer to God.

B
A. *J. P.*

AFFIRMATION is the solemn asseveration made by Quakers and Moravians in cases where an oath is required from others. The form prescribed is as follows:—"I, A B, do solemnly, sincerely, and truly declare and affirm." This privilege was first allowed by the act 7 & 8 Wm. III. c. 34; but it was confined to civil cases until the year 1828 when (9 Geo. IV. c. 32) it was extended to criminal cases. A false affirmation subjects the offender to all the penalties of perjury. By 3 & 4 Wm. IV. c. 82, the privilege was extended to the denomination called Separatists, and by 1 & 2 Vict. c. 77, to all persons who *have been* Quakers or Moravians, and who retain conscientious objections to oaths.

AFFREIGHTMENT, in the law of shipping, is the contract by which a vessel, or the use of it, or the use of some part of it, is let out on hire. The contract is of two kinds, *charter-party* and *general ship*, or *ship on general freight*. The contract does not require to be in writing, but if it be so it must be duly stamped. The obligations generally expressed, and always understood, on the part of the shipmaster, are, that the vessel must be seaworthy, provided with all necessaries, and in every way fit for the voyage undertaken. The crew also must be sufficient in number and ability. Where such is the usage, he must have a pilot on board. The vessel must be at the port ready to receive goods, for a reasonable period, and must sail at the appointed time, weather and tide permitting. She must be properly navigated, and also directed to her port of destination by the usual and approved course. If she deviate unnecessarily, the master and owners are responsible if loss be occasioned, though it should be by the act of God or the king's enemies. The master must not incur risk by sailing with contraband goods on board, or without the proper papers. He must use every effort to convey the cargo in safety. Where he cannot proceed in his own ship, he must forthwith adopt such means as may be best suited to preserve the safety and value of all the property committed to his charge. "Transshipment," "for the place of destination, if it be practicable, is the first object, because that is in furtherance of the original purpose; if that be impracticable, return or a safe deposit may be expedient. The merchant should be consulted if possible. A sale is the last thing the master should think of, because it can be only justified by that necessity which supersedes all human laws. If he sell without necessity, his owners, as well as himself, will be answerable to the merchant; and they will be equally answerable if he place the goods at the disposal of a Vice-Admiralty Court in a British colony, and they are sold under an order of the court, such court having no authority to order a sale. And the persons who buy under such circumstances will not acquire a title as against the merchant, but must answer to him for the value of the goods." (*Abbot*, 243, 244.) On his arrival the master must report his ship and crew, exhibit his manifest, and deliver the cargo to the consignee [BILL OF LADING] on payment of charges. [FREIGHT.]

The obligation on the part of the freighter or merchant, is to furnish a sufficient cargo—if he have covenanted for a full one, he must provide it though it exceed what was specified as the burthen of the ship, becoming liable in compensation for any portion not occupied. This compensation for the freight of cargo stipulated for, but not supplied, is called *dead freight*. Certain days are generally specified, during which the merchant is entitled to delay the vessel in loading and unloading; these are termed "Lay-days." A specific sum is in some cases covenanted to be paid, should the vessel be longer detained, and if a rate is not agreed upon, a charge may be made of the nature of damages. [DEMURRAGE.] Before receiving delivery of the cargo, the merchant must pay the freight. (*Abbot*, 162-425. *Smith's Mercantile L.*, 239-261.)

AGAL-AGAL, a glutinous substance obtained from a seaweed in the Philippine Islands. It is much used in China for gumming silks and paper.

AGARIC (*Boletus*), a fungus growing on trees. Two species of boletus are known under the same name. The *B. pini laricis*, or male agaric of druggists, was at one time employed as a purgative, but it is now in disuse. The *B. ignarius*, called female agaric, was formerly valued as a styptic, but is at present chiefly used for preparing the tinder or touchwood called on the continent *amadou*, and in this country *German tinder*. It is found in most countries, and particularly in the Highlands of Scotland, on the trunks of old ash and other trees. That which grows upon the oak, however, is most esteemed.

AGATE (Ger. *Achat*), popularly called Scotch pebble, is a well-known stone used in jewellery and in the arts. It is one of the modifications of form under which silica is found in almost a state of purity. The siliceous particles are not arranged so as to produce the transparency of rock crystal, but a translucent, sometimes almost opaque substance, with a resinous or waxy fracture; and a variety of shades of colour are produced by a minute quantity of iron, for the beauty of which, together with the high polish they are capable of receiving, agates are highly prized as ornaments. Agates are usually met with in that variety of the trap rocks called amygdaloid or mandelstein; they are also found as loose pebbles in the beds of rivers or in gravel, but in these cases they have been derived from the disintegration of amygdaloids. They vary in size from that of a pin head to a foot in diameter, but those of one, two, or three inches are the most common. They are found in the river Achates, now the Drillo, in Sicily, whence it is said they derive their name; but the principal supply is procured from Oberstein, in Germany. They also occur in many parts of Scotland, especially in the Isle of Skye, and at Kinnoull near Perth. The stones known by the names of Carnelian, Calcedony, Onyx, Sardonyx, Mocha-stone, Blood-stone, Chrysoprase, and Plasma, are closely allied to Agate, and in chemical composition they are not distinguishable, except in the case of the Chrysoprase, by its colouring matter.

AGENT. [PRINCIPAL AND AGENT.]

AGIO, a term applied in some parts of the continent to the premium or per centage allowed on a better sort of money when it is given in exchange for an inferior kind. Thus, at Hamburg, when 100 marks banco are exchangeable for 120 marks currency, the agio on banco is said to be 20 per cent.; it being always reckoned upon the more valuable money. In France, again, where payments can be demanded only in silver coin, a small premium is sometimes paid by the receiver in order to obtain gold coin; this premium is called the agio on gold.

When the per centage, or difference, is considered, with regard to the inferior sort of money, it is called *discount*. Thus, when 100 dollars in bank-notes are exchangeable for only 90 dollars in coin, the discount on the paper is said to be 10 per cent.

AHM, AAM, or OHM, a German wine measure, varying in different places. In Dantzic, it contains 33; in Hamburg, 31¾; in Hanover, 34¼; and in Rotterdam, 33¼ imp. galls. nearly.

ALABASTER (It. *Alabastro*, Fr. *Albâtre*), a species of gypsum resembling marble, but softer, takes a duller polish, and when pure is much whiter and semitransparent. Some stones, however, of a veined and coloured appearance, and also certain transparent and yellow ones of a sparry nature, are termed alabasters. It is used for small statues, lamps, vases, and other ornaments. The finest is found near Volterra, in Tuscany. It is also procured in Staffordshire, Derbyshire, and in great abundance on the shores of the Bristol Channel, between Watchet and Minehead, where it is manufactured into toys and ornaments.

ALBATA, *British Plate* or *German Silver*, a compound of tin, copper, and nickel, now extensively used in this country in the manufacture of a variety of articles which were formerly plated or made entirely of silver. Albata goods do not look so well as those plated, when the latter are entirely new, but they possess superior durability. Birmingham and Sheffield are the principal seats of this manufacture.

ALCOHOL (Fr. *Esprit de Vin*. Ger. *Weingeist*. It. *Spirito di vino*), is a liquid which forms the intoxicating principle of fermented liquors. It is by the distillation of such liquors that ardent spirits are obtained, and they receive the names of brandy, rum, gin, or whisky, according to the nature of the substance employed, but in every case consist almost entirely of three ingredients, viz. alcohol, water, and a little oil or resin, to which they owe their flavour and colour. When these liquids are redistilled, the first portion that comes over is a fine light, transparent fluid, known in commerce by the name of *rectified spirits*. When as highly rectified as possible, the specific gravity of the liquid obtained does not appear to be less than ·820, and is generally more. Alcohol cannot, by this process, be deprived of the whole of the water with which it is combined; but by redistillation with hot muriate of lime, it is procured of the specific gravity ·791 at 68°, or ·796 at 60° Fahrenheit. In this state it is the strongest that can at present be produced, and it is therefore called *pure* or *absolute alcohol*. The alcohol of commerce or *spirit of wine*, is never so strong as this; its specific gravity is seldom under ·837. In this state it is fragrant, limpid, colourless, volatile, inflammable, and of a pungent agreeable taste. It has never been frozen. At 173½° it boils. It combines with water in every degree; and the proportion of it present in common spirits is best judged of by their specific gravity, and is usually ascertained by "*Sikes' Hydrometer*." The specific gravity of what is called pure alcohol being ·796 at 60° Fahrenheit, and that of water 1·000, it follows, that the lighter a spirit is the stronger is it. What in this country is called *proof spirits*, was understood to be a mixture of equal bulks of alcohol and water; but this is not the case: it contains 52-100 parts of its weight of water. When spirits are weaker than this, they are said to be *under proof*; when stronger, to be *above proof*: thus, "10 under proof" signifies that every 100 gallons of that spirit would require to have 10 gallons of water abstracted from it to bring it up to proof; and "10 over proof," that every 100 gallons contains too little water by 10 gallons. Philosophers, however, are not yet agreed upon absolute alcohol; and hitherto the term proof-spirit has been often indefinitely employed.

The great importance of accuracy in determining the strength of alcoholic mixtures induced the Lords of the Treasury, a few years ago, to request the Royal Society to give an opinion upon the subject. In the report of the committee of this body (drawn up by Mr Faraday), it is stated, that "a definite mixture of alcohol and water is as invariable in its value as absolute alcohol can be. It is also invariable in its nature." It is therefore proposed, "that *standard spirit* be that which, consisting of alcohol and water alone, shall have a specific gravity of 0·92 at the temperature of 62° Fahrenheit, water being unity at the same temperature; or in other words, that it shall at 62° weigh $\frac{92}{100}$ths, or $\frac{23}{25}$ths of an equal bulk of water at the same temperature." "This standard is rather weaker than the old proof spirit (the specific gravity of which, at 62° is 0·918633), in the proportion of nearly 1·1 gallon of the present proof-spirit per cent." In regard to the specific gravity of any mixture of alcohol and water, "your committee are of opinion that the hydrometer is the instrument best fitted, in the hands of the excise officer, to indicate that specific gravity, and they think it ought to be so graduated as to give the indication of strength, not upon an arbitrary scale, but in terms of specific gravity, at a fixed temperature, which in the present case should be 62°, or that of the standard spirit."

Alcohol is extensively used in the arts. It dissolves the resins, camphor, and the essential oils; and hence its use in varnish-making, in pharmacy, and in perfumery; while its fluidity at the lowest temperatures,—its antiseptic properties, and its purity and ready inflammability, render it applicable to a great variety of other purposes. (*Brande's Chemistry. Ure's Dictionary of Arts*, art. Alcohol.) [Spirits.]

ALDER (*Alnus glutinosa*), an aquatic tree, found in all parts of Europe, the north of Africa, and in Asia and North America. Its timber is reddish yellow in colour, and being soft works easily. It is much used for piles, pumps, and other underground purposes where it is kept constantly wet; and its stems, hollowed out, are among the best materials, next to metal, for waterpipes. The veiny knots are often cut into veneer. The bark is valuable for tanning; and the young shoots, when mixed with other ingredients, are used for dyeing. The alder rots when exposed to the weather, and when dry is subject to worms.

ALE. [Beer.]

ALEXANDRIA. [Egypt.]

ALGIERS extends about 500 miles along the northern shore of Africa, from about 8° 30′ east, to 1° 30′ west. It is bounded on that side by the Mediterranean, on the east by Tunis, south by the Sahara or Great Desert, and west by Morocco, from which it is separated by the desert of Angad. There are four provinces, Algiers Proper, Constantina, Titteri, and Mascara; the first was under the direct government of the Dey; the others under local rulers called Beys. In 1830, the principal part of the country was conquered by the French, by whom it is still retained. Population, about 2,000,000, one half being Kabyles or Berbers, and the rest chiefly Arabs, Moors, Cooloolis, Jews, and Soudan negroes.

The country is traversed by branches of the great mountain-chain of Atlas, and in general is well watered and highly fertile. In the high grounds of the interior, the same plants can be reared as are cultivated on the opposite shores of the Mediterranean; while there is reason to believe that all the productions of more southern, and even of tropical climates, might on the low grounds near the coast be cultivated with advantage. The grain sown is wheat, barley, maize, millet, doura and rice. The mountains are rich in metals and timber; and in the eastern parts, towards Oran and Mostagan, there is great abundance of fossil salt. The manufactures are inconsiderable. On the coast, near Bona, there are extensive coral banks, the seat of an important fishery, carried on chiefly by Italian vessels.

Algiers, 36° 48′ N., 3° 4′ E., the principal city and port, rises in the form of an amphitheatre near the middle of the coast. It is defended on the seaside by very strong batteries. The harbour, a work of immense labour, is formed by two projecting moles; and is about 15 feet deep; but it is unsafe, and vessels lying along it must be strongly fastened by cables. Formerly the population was about 70,000, including a number of Jews; but the expulsion of the Turks, and the emigration of the Moors, have since greatly reduced this number. Exports,—oil, wax, hides, skins, corn, fruit, wool, rugs, embroidered handkerchiefs, ostrich feathers. Imports,—cotton goods, silks, spices, metals, hardware, earthenware, and other manufactured goods.

The principal intercourse of Algiers is with France, Britain, Italy, and Spain. The extent of the British intercourse cannot be precisely ascertained, as the public accounts do not distinguish the trade of the different Barbary States, while large quantities of British manufactures, particularly cottons, are imported by way of Leghorn and Gibraltar. In 1832, the value of cottons imported into the town of Algiers, was from France, £7363; and of British cottons from Leghorn, £28,558; Gibraltar, £17,900; Tunis, £307; total, £46,765; in all, £54,128. In 1837 the amount of imports into Algiers from France (exclusive of £83,507 of specie) was £703,787; of which French merchandise, £472,020; foreign merchandise, £231,767; in the same year the amount of exports to France was only £58,012 exclusive of £9331 of specie.

The other chief ports possessed by the French are *Oran*, *Bona*, and *Mostagan*. The principal inland town is *Constantina*, pop. 30,000.

The *Measures, Weights, and Monies* are chiefly those of France. The Algerine pataca, or piastre of 24 tomins, is valued at 1 franc 86 cents, or 1s. 6d. sterling. The Turkish pic used in measuring cloth = 24½ inches; the Moorish pic, used for cotton and linen, = 18·4 inches. The caffise of 16 tarries = 8¾ imperial bushels. The metalli of oil weighs 37 lbs. 6 oz. avoirdupois. The metical = 73 grains troy; and 100 rottoli = 119 lbs. avoirdupois.

The conquest of Algiers has relieved the Mediterranean from the dread of piracy; though it will be long before any other advantage can be derived from this achievement by France. The climate is indeed good, and the soil rich; but the inhabitants of the adjacent country are regardless of treaties, strangers to the enjoyments of social life, addicted to plunder, and accustomed to consider war as their profession. For some years rumours prevailed that Louis Philippe was determined to relieve his exchequer of the burden entailed by this colony; but as some of the most formidable obstacles to success have been removed, no doubt is now entertained that he will persevere in the undertaking. (*Russell's Barbary States, Edin. Cab. Lib. No.* XVII.)

ALICANT. [Spain.]

ALIEN, in its original acceptation, is applied to any one born out of the dominions of Great Britain. The disqualifications of aliens do not, however, apply to all individuals so situated. By 7 Anne, c. 5, the children of all natural born subjects, though they happen to be born beyond the liegeance of the crown, are deemed to be natural born subjects; and in explanation, it is enacted by 4 Geo. II. c. 21, § 2, that this privilege does not include the children of persons who, at the time of the birth, were attainted, or liable to the penalties of treason. By 13 Geo. III. c. 21, § 1, the benefit is extended to grandchildren of natural born subjects, *i. e.* to the children of persons declared to be naturalized by these statutes. Aliens cannot hold real property in the United Kingdom, but an alien may trade and acquire property in goods, money, and other personal estate. "Also," says Sir William Blackstone, "an alien may bring an action concerning personal property, and may make a will, and dispose of his personal estate: not as in France, where the king, at the death of an alien, is entitled to all he is worth by the *droit d'aubaine* or *jus albinatus*, unless he has a peculiar exemption" (I. 372). This hard law is now repealed in France, to the extent of allowing the representative of a foreigner to succeed to his property, in so far as Frenchmen hold the same privilege in the foreigner's native country (*Code Civil*, Liv. iii. Tit. i. ch. 2, art. 726). Alien enemies can hold no property in the United Kingdom, and cannot pursue actions. "The children of aliens," says Blackstone, "born here in England, are, generally speaking, natural born subjects, and entitled to all the privileges of such, in which the constitution of France differs from ours; for there, by their *jus albinatus*, if a child be born of foreign parents, it is an alien" (I. 374). By the later law of France, however, children of foreign parents may become naturalized by claiming the privilege in the course of a year following the attainment of majority, and declaring their determination to reside permanently in France (*Code Civil*, Liv. i. Tit. i. ch. 1, art. 9). The crown may grant to aliens letters of denization. A denizen may "take lands by purchase or devise, which an alien may not, but cannot take by inheritance: for his parent, through whom he must claim, being an alien, had no heritable blood; and, therefore, could convey none to the son. And upon a like defect of hereditary blood, the issue of a denizen, born *before* denization, cannot inherit to him; but his issue born *after* may" (*Blackstone*, i. 374). The rule in Scotland appears to be analogous. (*Erskine's Inst.* iii. 10, § 10.) The full right of citizenship can only be conferred by Act of Parliament. In bills of naturalization, it is usual to insert a clause disabling the party from being a Member of the legislature or of the Privy Council. By 13 Geo. II. c. 3, every foreign seaman who, in time of war, serves two years on board an English ship, by virtue of the King's Proclamation, is naturalized; and by statutes 13 Geo. II. c. 7; 20 Geo. II. c. 44; 22 Geo. II. c. 45; 2 Geo. III. c. 25, and 13 Geo. III. c. 25, all foreign Protestants, upon their residing seven years in any of the American colonies, without being absent two months at a time, and all such persons serving two years in a military capacity there, or being three years employed in the whale-fishery, without afterwards being more than one year absent from the king's dominions; and by 26 Geo. III. c. 50, §§ 24, 27, 28; and 28 Geo. III. c. 20, § 15, all foreigners who have established themselves and families in Britain, and carried on the southern whale-fishery, are naturalized as if by act of naturalization. In Ireland, the Parliament passed a temporary act (14 and 15 Cha. II. c. 13) for naturalizing all aliens of the Protestant religion intending to reside permanently with their families and property. This act was continued by 4 Wm. & Mary, c. 2, and rendered perpetual by 4 Geo. I. c. 9.

By 6 & 7 Wm. IV. c. 11, all aliens, on their arrival from abroad, must declare their name and country to the chief officer of customs at the port of landing, and show him their passport, with a view to their being registered, under penalty of £2; and shipmasters must report all aliens brought over seas in their vessels, under a penalty of £20, and £10 additional for each alien on board.

ALKALIS, a class of chemical bodies characterized generally by their peculiar hot, bitter, and caustic taste; by their changing the colours of vegetable blues to green, and yellows to brown; and by their neutralizing acids, and forming with them the class of compounds called salts. The principal alkalis are ammonia, potash, and soda: an account of which, and such others as possess commercial interest, will be given under their proper heads. The value of any alkali is determined by an *alkalimeter*, a graduated instrument which shows the quantity of acid neutralized by a given weight of the sample, and hence the amount of pure alkali contained in it. The alkalimeter at present used, is minutely described in Mr Faraday's *Chemical Manipulation*.

ALKANET (Fr. *Orcanette*. Ger. *Orkanez-wurzel*. It. *Arganetta*. Sp. *Arcaneta*), the root of a species of bugloss (*Anchusa tinctoria*), a native of the warmer parts of Europe. It is of a dark red colour, and white within; and imparts an elegant tint to alcohol, wax, and to all unctuous substances.

The colouring matter is confined to the bark, and the small roots are preferred, as these have most bark in proportion to their bulk. Alkanet is produced in England; but the best is imported from near Montpellier in France, and from the Levant.

ALLIGATION, in commercial arithmetic, is a formula for ascertaining the proportion of constituents or ingredients in a mixture.

I. To find what quantity of any number of ingredients, whose rates are given, will compose a mixture of a given rate. *Rule*—1. Write down the rates of the ingredients under each other. 2. Connect by a curved line, the rate of each ingredient, which is less than that of the mixture, with one or any number of those that are greater, and each greater rate with one or any number of those that are less. 3. Put the difference between the mixture rate, and that of each of the ingredients, opposite the contrary rate with which it is linked. 4. Then if only one difference stand against any rate, it will be the quantity belonging to that rate; but if there be several, their sum will be the quantity.

Example 1. Wine at 9s. per gallon is to be mixed with wine at 6s. per gallon; required the proportions so as to sell the mixture at 7s. per gallon.

$$7\left\{\begin{matrix}9\\6\end{matrix}\right) \quad \begin{matrix}\ldots & 1\text{ at 9s. per gallon}\\ \ldots & 2\text{ at 6s.}\quad\ldots\ldots\end{matrix}$$

That is, the wine at 9s. per gall. must be to that at 6s., in the proportion of 1 to 2.

Example 2. What quantity of spirits at 17s. 18s. and 22s. per gallon, must be taken, so as that the mixture may be worth 20s. the gallon.

$$20\left\{\begin{matrix}17\\22\\18\end{matrix}\right) \quad \begin{matrix}\ldots\ldots & & 2\text{ at 17s. per gallon.}\\ \ldots & 3+2= & 5\text{ at 22s.}\quad\ldots\ldots\\ \ldots\ldots & & 2\text{ at 18s.}\quad\ldots\ldots\end{matrix}$$

Ans. 2 gallons at 17s.; 5 at 22s.; and 2 at 18s.

II. When the whole composition is limited to a certain quantity. *Rule.*—Find an answer as before, by linking; then say as the sum of the quantities, or differences thus determined, is to the given quantity, so is each ingredient found by linking, to the required quantity of each.

III. When one of the ingredients is limited to a certain quantity. *Rule.*—Take the difference between each price and the mean rate as before; then, as the difference of that ingredient whose quantity is given is to the rest of the differences respectively, so is the quantity given to the several quantities required.

In the same manner, questions of this kind may be worked when several of the ingredients are limited to certain quantities, by finding first for one limit, and then for another. In general, however, cases in alligation are best resolved by an analytical process, as they form what are called *indeterminate* or *unlimited* problems, from their admitting of a variety of answers. [AVERAGE.]

ALLOWANCES. [TARE.]

ALLOY, in coinage, a certain proportion of harder metal, mixed with pure gold and silver, in order to render them less flexible, and better adapted for general use.

ALLSPICE. [PIMENTO.]

ALMONDS (Du. *Amandelen.* Fr. *Amandes.* Ger. *Mandeln.* It. *Mandole.* Por. *Amendoas.* Sp. *Almendias*), the kernel of the fruit of the almond tree (*Amygdalis communis*), a native of Syria and Barbary, but now naturalized in the south of Europe. Almonds are of an oblong compressed shape, nutty taste, and are covered with a thick brown skin. There are two permanently distinct varieties,—the *sweet* and the *bitter*; but many subvarieties are distinguished in the places of growth. It is said that the eye can discover no difference between the sweet and bitter almonds, nor between the trees which produce them; and it is asserted (though without probability) that the same tree, by culture, has been made to bear both. Almonds are now little used in medicine; the sweet, are a common article of the dessert; the bitter, are used chiefly in cooking to give a flavour to other articles. Both become rancid by keeping. They are gathered in August and September, but are not generally shipped till the middle of October. They are imported into this country chiefly from Barbary, especially Mogadore, and from Valencia, Alicant, and Malaga, in Spain; small quantities are, besides, brought from France, Portugal, and Italy. Bitter almonds are obtained almost wholly from Barbary. The best sweet are the *Jordan* variety, brought from Malaga; they are longer, flatter, less pointed at one end, and less round at the other, and have a paler cuticle than the other kinds.

Prior to 1832, when the duty was reduced, the consumption of almonds was only about 3000 cwts. annually; but it is now 8000 cwts. In 1836, there were imported 17,370 cwts.; re-exported, 8814 cwts.; and entered for consumption, 8061 cwts., yielding of customs' revenue, £8101. The prices in bond, per cwt., quoted in the London market in July 1839, were, Jordan, £9 to £10; Valencia, £4, 10s.; Barbary, bitter, £2, 10s.

Customary Tares.—In the shell, 2-3d parts; in baskets of 1¼ to 1½ cwt., 6 lbs. each; in serons of 1¾ to 2 cwt., 12 lbs. each.

ALMOND OIL, a fat or greasy substance expressed from sweet and bitter almonds. Sp. gr. ·915. It is pale yellow, but becomes colourless when long exposed to light. It soon grows rancid, especially if in contact with oxygen. [OIL.] It is so plentiful, that 5½ lbs. of almonds have yielded 1 lb. 6 oz. of oil by cold expression, and ¾ lb. more on heating them.

ALMUDE, a measure for liquids in various places. In Lisbon, it contains 3·64 imp. galls.; in Oporto, 5·61 do.; in Faro, 4·08 do.; and in Constantinople, 1·15 do.

ALOE, AMERICAN. [MAGUEY.]

ALOES (Fr. *Aloès.* Ger. It. & Sp. *Aloe.* Pers. *Sibbir*), a bitter resinous juice, extracted from the leaves of a succulent plant of the same name. It is used as a common purgative medicine. Three kinds are known to druggists, namely,—1. *Socotrine*, from the island of Socotra, is sometimes imported in chests from the Levant; it is the purest, though seldom to be found genuine in this country: the aloes brought from the Cape Colony, and Melinda, are sometimes designated by the same name, but they are much inferior in quality. 2d, *Hepatic*, or liver-coloured aloes, is imported chiefly from Bombay in gourds; a darker kind is brought from Barbadoes. 3d, *Caballine*, known by its rank smell, is used only for horses. These varieties of aloes are said to differ only in purity, and it is probable that they may be obtained, in some instances, from different species of the same plant. Socotrine aloes is said to be obtained by only draining the leaves, after being cut at their base: Hepatic or Barbadoes aloes, by boiling or slight pressure; and horse aloes seem to be a coarse preparation from the dregs of the last. Those of best quality are glossy, not very black, but brown; when rubbed or cut, of a yellow colour; compact, but easy to break; easily soluble; of an unpleasant peculiar smell, and an extremely bitter taste.

ALOE-WOOD (Fr. *Bois d'Aloès.* Ger. *Aloe-holz.* Lat. *Lignum Aloes*), called also *Xylo-Aloes* or *Calumbac*, is procured from the interior part of the trunk of a large tree (*Aquilaria Aghallocha* of Roxburgh), growing in some parts of Assam, Cochin, and China. It is of a dark colour, and is saturated with a peculiar aromatic resinous matter, which is highly esteemed by eastern nations. This substance is said to be the produce of disease, as the sound wood is white and inodorous. It is used as a stimulating medicine, as well as an ingredient in incense. (*Ainslie's Materia Indica.*)

ALQUEIRE, a corn measure in Portugal and Brazil. 100 alqueires of Lisbon = 37¼ imp. bushels; and 100 alqueires of Maranham = 124¾ imp. bushels.

ALUM (Arab. *Shebb.* Du. *Aluin.* Fr. *Alun.* Ger. *Alaun.* It. *Allume.* Por. *Pedrahüme.* Rus. *Kwassü.* Sp. *Alumbre*), an earthy salt extensively used in the arts. It is found native only in small quantities; but it has long been produced artificially. The basis of common alum is sulphate of alumina, combined with sulphate of potash. It is brittle, colourless, inodorous, has a sweetish astringent taste, and crystallizes generally in transparent octahedrons. Sp. gr. 1·73. Water at 60° Fahren. dissolves about 1-15th, and at 212°, about 3-4ths of its weight of alum. Its contamination with iron may be detected by nut-gall, or prussiate of potash; the last will give solution of alum a blue tint if it contain iron. The most extensive alum-works in Britain are at Hurlett and Campsie, near Glasgow, where it is prepared from slaty-clay, obtained from the shales of old coal-pits. It is also prepared extensively at Whitby, from a stratum of alum slate, said to extend 29 miles. But the British alum is inferior to the *Roch alum* imported from Smyrna, and also to the *Roman alum*, manufactured at La Tolfa, near Rome. This last is the purest of all, and is generally distinguished by being mixed with a little reddish powdery matter. Alum is also extensively produced in China, from whence it is exported to India. This salt is much used in dyeing and calico-printing, in consequence of the attraction of its base for colouring matter. It is also used in lake colours, leather dressing, pasting paper, clarifying liquors, by candlemakers to harden and whiten the tallow, &c. In medicine, it is employed as an astringent.

The price of British alum was lately quoted at 11s. per cwt., and Roch, at 24s. to 26s. per cwt. *Customary Tare*, in casks, 10 to 12 per cent.

AMADOU. [Agaric.]

AMALGAM, a name applied to the combinations of mercury with other metals.

AMAZON-STONE, a crystallized variety of felspar, of a beautiful apple-green colour. Localities, Ural Mountains and South America.

AMBER (Fr. *Succin.* Ger. *Bernstein.* It. *Ambra gialla.* Lat. *Succinum electrum.* Rus. *Jantar.* Sp. *Ambar*), a solid, brittle, carbonaceous substance, found in beds of lignite, in various countries, more particularly on the Adriatic and Sicilian shores, and in Prussia, near the seacoast, between Memel and Dantzic, where there are regular mines of it. It is discovered generally in nodules, or small pieces of a white, yellow, or brown colour, and very commonly translucent. When bruised, it exhales a slight aromatic odour. It is susceptible of a good polish, and when rubbed it becomes electrical. Sp. gr. 1·07. It is sometimes adulterated with copal or other resins, which are detected by their different appearance, and by not exhaling the proper odour when burned. The origin of amber is uncertain; Mr Phillips states that it is commonly considered to be a fossil resin. It is imported into this country chiefly from the Baltic, and is used in varnishes, as well as for ornamental purposes in the manufacture of necklaces, &c. In oriental commerce, it is carried into India from Japan, Madagascar, and the Philippines. (*Ainslie's Materia Indica*).

AMBERGRIS (Fr. *Ambergris.* Ger. *Ambra.* It. *Ambracani.* Lat. *Ambra grisea.* Sp. & Por. *Ambargris*), a substance found principally in warm climates, floating on the sea, or thrown on the shore; it is said to be a morbid product of the spermaceti-whale. It is generally procured in small fragments, but sometimes in masses weighing upwards of 100 lbs. When good, it is solid, opaque, of a bright gray colour, which is darkest externally, and intermixed with yellow or reddish streaks. It has a fragrant and peculiar odour when heated or rubbed. Sp. gr. about ·914. The best comes from Madagascar, Surinam, and Java. It is used as a perfume. It usually sells in London, at from 5s. to 11s. per oz. This high price leads to frequent adulteration of the commodity.

AMBOYNA. [EAST INDIAN ISLANDS.]

AMBOYNA, OR LINGOA WOOD, a fancy wood of various colours, and having the shades generally small. It is much used in cabinet-work, and is imported from Ceram and Amboyna, in logs of about 2 feet wide.

AMETHYST (Fr. *Amethyste.* Ger. *Ametyst.* It. *Amatista.* Por. & Sp. *Ametisto*), a precious stone of a purplish violet colour, and great brilliancy. It is of two kinds, the *oriental* and *common.* Of these, the oriental, which is a species of sapphire, is by far the most valuable. The common or occidental amethyst is merely a coloured variety of quartz, or rock crystal, and is in beauty, lustre, and hardness, much inferior to the oriental amethyst. It occurs crystallized, in rounded pieces, and in massive portions; but its primary form, like that of quartz, is a slightly obtuse rhomboid. It is most valuable when large, high coloured, and without flaws. It is found in India, Germany, Sweden, and Spain, but is imported into this country chiefly from Brazil. [SAPPHIRE.]

AMIANTHUS. [ASBESTUS.]

AMMONIA, *volatile alkali*, or *spirits of hartshorn*, a pungent volatile substance, of great importance and extensive use, which is formed during the putrefactive fermentation of animal matter. When pure, it is a gaseous body, composed of three equivalents of hydrogen and one of azote; sp. gr. ·590; but in medicine and the arts, it is generally used either in solution in water, or in combination with other substances.

LIQUID AMMONIA, or HARTSHORN, is an aqueous solution of ammonia, prepared either by passing the gas as it is formed directly into water, or by distillation from sal-ammoniac, burnt bone, and water. In the former case, the sp. gr. is ·880, in the latter ·954. It is limpid, colourless, very volatile, has a pungent smell, and a caustic taste; and is one of the most useful stimulants in the *materia medica.*

ACETATE OF AMMONIA, or SPIRIT OF MINDERERUS, is prepared by adding Sesqui-carbonate of ammonia, to dilute acetic acid. It has a sweetish bitter taste; and is employed externally as a refrigerant, and internally as a diaphoretic.

CARBONATES OF AMMONIA.—The *Carbonate of Ammonia* may be obtained by uniting one volume of carbonic acid gas with two volumes of ammonial gas. It is a dry, white, volatile powder, and is used as a stimulant in a preparation called *Spirit of Sal Volatile.* The *Sesqui-carbonate of Ammonia* is obtained by sublimation from a mixture of muriate or sulphate of ammonia and chalk, and usually occurs in cakes, broken out of the subliming vessel. When fresh, it is of a crystalline texture, semi-transparent, and hard, odour pungent, and taste penetrating. It is extensively used in chemical preparations. In medicine, it is employed as a stimulant, and is usually called *smelling-salts.* It is also used instead of yeast, in making some kinds of bread.

MURIATE OF AMMONIA, or SAL-AMMONIAC (Fr. *Sel Ammoniac.* Ger. *Salmiak.* It. *Sale Ammoniaco.* Rus. *Naschatur*), was originally procured from Egypt, where it was made from the soot of camel's dung. It is now, however, prepared in abundance in this country, by decomposition of the ammonial fluid given off during the preparation of coal-gas; also, by a complicated process, from bones and other refuse of animal substances containing its ingredients. It is likewise found native at Etna and Vesuvius, in some of the Tuscan Lakes, and in Persia, Bucharia, &c. As generally obtained, it is in large cakes of a semi-circular form, translucent and colourless, with a sharp saline taste, but no smell. Sal-ammoniac is extensively employed in the arts. It is used in preparing aqua regia,—in soldering some of the metals,—in tinning iron and copper,—in the preparing of dyes; also in various chemical manufactures. It is exported in considerable quantities to Russia and other parts of the Continent, and to the United States.

AMMONIACUM (Arab. *Feshook.* Fr. *Gomme Ammoniaque.* Ger. *Ammoniack*), a gum resin, procured, according to some authorities, from the *Heracleum gummiferum*, but by others referred to the *Ferula Orientalis.* It has rather a heavy smell, and a bitter sweet taste. It is in agglutinated masses of *tears*, or in separate dry drops, of a yellowish white colour. Sp. gr. 1·207. That which is decidedly gutti-form, of a clear and deep buff colour externally, paler within, and free from impurities, is most esteemed. It is produced in Persia, Abyssinia, and other places, but is imported into the United Kingdom from India. It is used in medicine as a stimulant; and in the arts, to form the *diamond cement* employed to join pieces of broken glass or porcelain.

AMPHORA. [ANFORA.]

AMSTERDAM. [HOLLAND.]

ANCHOR (Fr. *Ancre.* Ger. *Anker.* It. *Ancora.* Sp. *Ancla*), a heavy hooked iron instrument for fixing a vessel in a harbour or road. Large ships carry four principal anchors, the *sheet*, *best bower*, *small bower*, and *spare anchors*; and two small ones besides, for particular purposes, namely, the *stream* and *kedge*. The form of this well-known instrument remained almost unchanged from a very early period, until of late years, when more complex methods of fabrication have been partially introduced. (*Lardner's Cyclopædia. Manufactures in Metal*, v. i. p. 93.) Anchors are extensively manufactured in the United Kingdom; and nearly 2500 tons are annually exported to all parts of the world.

ANCHORAGE, a duty paid for the liberty of anchoring in a port. It means also a ship's anchoring ground.

ANCHOVY (Fr. *Anchois.* It. *Acciuga*), a small fish (*Engraulus encrasicholus*, Cuvier), about the size of a finger, of a blueish-brown colour on the back, and silvery white on the belly. It abounds in the Mediterranean, particularly off Gorgona, near Leghorn, where it is taken in May, June, and July. It is also found on the coasts of France and Portugal, and occasionally on the shores of England. After being caught, and the heads and entrails separated, the bodies are salted and packed in small barrels, in which, if the air be excluded, they will keep for a considerable time. Genuine anchovies are small and firm, round backed, fibre red, with skin of a silvery white. Those that are dark brown without, with flabby pale coloured flesh, and tapering much towards the tail, are commonly *Sardines*, an inferior species, frequently substituted for, or mixed with, the true kind. They are used as a condiment. About 140,000 lbs. are annually imported.

Customary Tare, in barrels of 16 lbs., 6 lbs. each.

ANFORA, OR AMPHORA, a Venetian liquid measure = 114 imp. galls. nearly.

The ancient Roman amphora of 2 urnæ, contained about 6·39 imp. galls.; and the ancient Greek amphora or *amphoreus* of 6 choi, was equal to 3·61 imp. galls. nearly. (*Paucton's Metrologie.*)

ANGEL, an ancient English gold coin, first issued in 1465, by Edward IV., when it was valued at 6s. 8d. In the latter part of Henry VIII.'s reign, its value was raised to 8s.; and in the reign of Mary to 10s.; at which rate it was valued until the close of Charles I.'s reign; after which it was no longer coined.

The *angelet* or half angel of 3s. 4d., was anciently a very common coin; so much so, that forty pence became a proverbial expression for a small wager (*Shakspeare's Henry VIII.*); and it still remains the legal and established fee in many offices.

ANGELICA (Fr. *Angelique*), a large umbelliferous plant common in Britain, all whose parts have a fragrant aromatic smell, and a pleasant bitter taste. The *A. Archangelica*, a biennial, is generally cultivated in gardens for the use of confectioners, by whom a sweetmeat is made of the stalks. The roots are used in medicine, for which purpose, however, those from Spain and Bohemia are preferred. The common wild kind (*A. sylvestris*, a perennial) possesses properties similar to the other, but is much weaker. (*Duncan's Dispensatory.*)

Customary Tare in casks, 15 per cent.

ANGOLA extends from about lat. 1° to 12° S. along the W. coast of Africa; and comprehends the districts of Angola Proper, Loango, Congo, and Benguela. The whole is claimed by the Portuguese, but their settlements are chiefly confined to the coast. The residence of the governor is at St Paul de Loando; pop. 8000.

This coast is very imperfectly known, as foreign intercourse is prohibited by the Portuguese. It appears to be certain, however, that the principal, or rather the sole object for which it is resorted to, is the trade in slaves, of whom, from 18,000 to 20,000 are said, by Mr Martin, to be annually exported, chiefly to Brazil. For the protection of this infamous traffic, a considerable military force is maintained on the coast, composed mostly of convicts.

ANGOSTURA, OR CUSPARIA BARK, in the *materia medica*, is a valuable tonic, obtained from the stem and branches of a species of *Galipea*,—the former being in flat, and the latter in quilled pieces. It breaks with a short and resinous fracture, is covered with an ash-coloured epidermis, is internally smooth, and of a dull brownish-yellow colour. Its odour is rather nauseous and fishy, and it has a strong bitter flavour, accompanied by a peculiar and somewhat aromatic pungency.

It is found in the warmer parts of South America, especially in the neighbourhood of Angostura in Colombia.

A spurious and poisonous bark is sometimes met with under the name of angostura. "This is more intensely bitter, and in shorter and less regular pieces than the genuine; internally, it is nearly black, and externally, covered with a rough rust-coloured epidermis." (*Brande's Pharmacy.*)

ANIMI, improperly called gum animi, is a resin which exudes from a large tree (*Hymenæa*) growing in South America. It is of a pale brownish-yellow colour, and is met with partly in transparent and somewhat unctuous grains or *tears*, and partly in larger brittle masses. It often contains a great many insects. Sp. gr. about 1·055. In commerce it is distinguished as "washed" and "scraped,"—the latter being the most valued. This resin is extensively used by varnish-makers.

ANISEED is the product of an annual umbelliferous plant, a native of Egypt, but cultivated in various parts of Europe. It has an aromatic smell, and a warm sweetish taste. The small compact seed imported from Spain, is usually preferred to the lighter and larger kind, which is the growth of this country. It is an article of the *materia medica*.

Oil of Aniseed is a volatile fluid, obtained from the seeds by distillation; it concretes at about 50°, which is its leading character. It is in general imported for pharmaceutical use, from Spain; and is consumed chiefly in the preparation of horse medicines.

ANKER, a liquid measure in various places. The English anker contains 10 wine gallons, or 8⅓ imp. galls. The Scottish anker of 20 Scottish pints, equal about 7½ imp. galls. In Copenhagen, the anker contains about 8¼ imp. galls.; in Prussia, 7½; in Amsterdam, Riga, and Pernau, 8½; in Revel, 9¼; and in Rostock, nearly 8 imp. galls.

ANNA, an Indian money of account, equal to the 16th part of a rupee, or about 1½d. sterling; also a small weight.

ANNAM, an empire in the eastern peninsula of India; bounded N. by China, E. and S. by the Gulf of Tonquin and Chinese Sea; and W. by Siam. It was established about the beginning of the present century, and comprises the kingdoms of Cochin-China, Tonquin, Kamboja, Chiampa, Bao or Boatan, and part of Laos. Area vaguely estimated at 98,000 square miles; and population at 6,000,000. The capital, Hué, is one of the strongest fortified towns in Asia; pop. 100,000. The government is a despotic monarchy, with a sort of council composed of the officers of state: the king is nominally a vassal of China.

The two extremities of the empire, Kamboja on the S. and Tonquin on the N., consist chiefly of low alluvial tracts, little elevated above the level of the sea; while the central part, or Cochin-China, is generally mountainous, with here and there valleys of considerable extent and fertility. A material diversity of climate is found to obtain throughout the empire, resulting as well from physical aspect as from geographical situation. In the northern and southern provinces, the seasons observe the same course as in Malabar and Bengal, but in Cochin-China a high range of mountains produces the same effect as the central range of Hindostan, in reversing the order of seasons; so that a dry season prevails during the south-west, and a wet one during the north-east monsoon,—the rains continuing from October till March. The climate is in general salubrious. The metallic productions are inconsiderable, except in Tonquin, which abounds both in the useful and precious metals. The mines are worked entirely by Chinese, and furnish employment, according to Mr Crawfurd, to about 25,000. The yearly produce of the silver mines is stated at about 213,600 ounces. The vegetable species differ little from those in similar latitudes in other parts of India. Tea and silk are produced in the northern provinces; but, like all other productions of the country demanding the exercise of skill and intelligence, greatly inferior to those of China. Certain descriptions of cinnamon, cardamums, eagle-wood, and other trifling articles, are subject to the monopoly of the government. The domestic traffic of the country is chiefly carried on by the great rivers of Kamboja and Tonquin, or by the seacoast.

The foreign trade is greatly inferior to that of Siam. It is carried on chiefly with that country, China, and the British ports within the Straits of Malacca. The intercourse with China is partly by sea, and partly by land with the provinces adjoining Tonquin; the exports consist principally of cardamums, areca-nut, sugar, cinnamon, salt, salt fish, rice, fancy woods, varnish, eagle-wood, ebony, cotton, stick-lac, ivory, peltry, hides and horns, deers' sinews, and ornamental feathers, with a variety of dyeing drugs and gold and silver bullion from Tonquin; the imports are teas, wrought silks, Chinese and British manufactures, and Bengal opium. The intercourse with Siam is entirely conducted in vessels belonging to the Siamese port of Bankok. The trade with the British ports has chiefly originated since the establishment of Singapore in 1819; the exports are confined to rice, salt, sugar, raw silk, with some minor commodities; the imports are opium, catechu for the consumption of the Kambojans, iron taken to Saigon only, fire-arms, with some British woollens and white cotton goods. The direct intercourse with Europeans is inconsiderable; the greater part of the domestic, and almost the whole of the foreign commerce, is in the hands of the Chinese, who are both the merchants and mariners of the empire. The *seaports* are numerous, and in general good. The principal are Saigon, in Kamboja; Faifo and Hué, in Cochin-China; and Cachao, in Tonquin. The latter, situate in lat. 22° 36′ N., and long. 105° 11′ E., pop. 150,000, may be regarded as the commercial capital of the empire.

Measures and Weights.—The ordinary weights are those of China. At Hué and Faifo, however, the picul = 112 catties; and at Saigon, a picul of sugar = 1½ picul, or 150 catties. Rice is sold by the bag of 50 catties, though commonly 2 catties short of this amount.

Money.—The common money of account is the quan of 10 mas, or 600 sapeks. The only coin is the sapek, which is made of zinc; and the 600 forming a quan are commonly strung upon a filament of ratan, and in this manner kept for use; forming a bulky and most inconvenient currency. Ingots of gold and silver, stamped by the government, though current, are not considered coin. The Spanish dollar passes in Cochin-China, and is valued at 1½ quan by the government.

Duties.—No import duties are levied; and the only article prohibited is opium, which, however, is readily sold by the Chinese. An export duty of 5 per cent. is levied on cardamums, pepper, cinnamon, ivory, rhinoceros' horns, esculent nests, sapan wood, ebony, and red wood; and on timber and cordage 10 per cent. The exportation of coin, bullion, copper, agila wood, rice, and salt is contraband; but the prohibition is rather nominal than real; and the exportation of rice and salt is allowed by license. The chief port charge is a duty on the measurement of the vessel, the amount of which is lowest at the capital, and highest at Saigon,—an absurd distinction intended to counterbalance the natural disadvantages of the northern ports, and place them on an equality with the fine harbour of Saigon. (*Crawfurd's Siam and Cochin-China.*)

ANNATTO, or ARNOTTO (Du. *Orleaan, Rokoe.* Fr. *Rocou.* Ger. *Orlean.* It. *Oriana.* Por. *Oriana*), a reddish dye, is an inspissated extract from the pellicles of the seeds of the *Bixa Orellana*, a native of the Malayan archipelago. It is brought to this country from Brazil and Guiana, but it is also to be found in the East and West Indies. It is used by dyers for giving more or less of an orange cast to the simple yellows,—as an ingredient in varnishes,—and for colouring cheese. Annatto is moderately hard, of a brown colour on the outside, and a dull red within. There are two kinds. *Flag* or *Cake* annatto, in cakes of about two or three pounds weight each, is generally enveloped in large flag leaves. *Roll* annatto, a more concentrated extract, is brought in small rolls of a few ounces weight, and contains a larger proportion of colouring matter than the former. This is the kind used chiefly in dairies.

The consumption of annatto has much increased of late years, partly from a great abatement of the duty in 1832. In 1836, the quantity entered for home consumption was 233 987 lbs.

ANNUITY, any fixed sum of money which is payable either yearly or in given portions at stated periods of the year. Annuities are of two kinds: first those called *Certain*, payable during a fixed term of years, the value of which is founded upon the operation of compound interest; and *Annuities on Lives*, in which the operation of compound interest is combined with the chances affecting the duration of human life.

1. *Annuities Certain* for terms of years are currently sold by government, and by many of the insurance companies. Their value fluctuates with the market rate of interest; and the price of those sold by government, as well as by other parties, is generally regulated by the current rate of 3 per cent. stock;—the sum sunk in the purchase of an annuity producing a smaller, or a larger return, according as the price of stock is high or low. Thus, supposing 3 per cent. stock to be at par, or 100,—the rate of interest derived from investing money therein, being then only 3 per cent.,—a sum of £100 sunk in the purchase of an annuity from government for 20 years, would purchase only £6, 13s. 8d. per annum; but if the 3 per cents. fall to 80, they then yield a return of 3¾ per cent. interest for every £100 invested in them; and the same sum will purchase an annuity for 20 years of £7, 8s. The following table shows the rates at which the government annuities may be purchased at the common prices of stock:—

ANNUITIES FOR TERMS OF YEARS which £100 (*Money*) will purchase, when the 3 per cent. Stock, *ex dividend*, is at the following prices:—

No. of Years.	£99 3 6 £100 16 10 Rate, £3 per ct.	£91 12 1 £93 0 6 Rate, £3,5s. p.ct.	£90 4 6 £91 12 1 Rate, £3,6s.p. ct.	£88 17 9 £90 4 6 Rate, £3,7s.p.ct.	£87 11 10 £88 17 9 Rate, £3,8s.p. ct.	£86 6 7 £87 11 10 Rate, £3,9s.p. ct.	£85 2 2 £86 6 7 Rate, £3,10s.p.ct.	£79 9 5 £80 10 9 Rate, £3,15s.p.ct.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
10	11 12 11	11 15 10	11 16 5	11 17 0	11 17 6	11 18 2	11 18 9	12 1 8
15	8 6 6	8 9 6	8 10 0	8 10 8	8 11 3	8 11 10	8 12 6	8 15 6
20	6 13 8	6 16 9	6 17 4	6 18 0	6 18 6	6 19 3	6 19 10	7 3 0
25	5 14 3	5 17 5	5 18 1	5 18 9	5 19 4	6 0 0	6 0 8	6 3 11
30	5 1 6	5 4 10	5 5 6	5 6 2	5 6 10	5 7 6	5 8 2	5 11 7
35	4 12 8	4 16 1	4 16 8	4 17 5	4 18 1	4 18 10	4 19 6	5 3 1
40	4 6 2	4 9 8	4 10 5	4 11 1	4 11 10	4 12 6	4 13 3	4 16 11
45	4 1 3	4 4 11	4 5 7	4 6 4	4 7 1	4 7 9	4 8 7	4 12 4
50	3 17 5	4 1 2	4 1 11	4 2 8	4 3 5	4 4 2	4 5 0	4 8 10
60	3 12 0	3 16 0	3 16 9	3 17 6	3 18 3	3 19 2	3 19 11	4 4 0
70	3 8 6	3 12 7	3 13 5	3 14 2	3 15 1	3 15 11	3 16 9	4 1 0
80	3 6 1	3 10 4	3 11 1	3 12 0	3 12 11	3 13 8	3 14 8	3 19 0
90	3 4 4	3 8 9	3 9 7	3 10 6	3 11 5	3 12 3	3 13 2	3 17 9
100	3 3 2	3 7 8	3 8 7	3 9 5	3 10 4	3 11 4	3 12 3	3 16 10

2. *Annuities on Lives* are of different kinds, according as they are made to depend upon single lives, joint-lives, or upon lives subject to particular contingencies. They are, as well as the former class, currently sold by government, and also by insurance companies. Their value of course fluctuates with the market-rate of interest; but is mainly dependent upon the age of the nominee; being highest when the expectancy of life is greatest, and decreasing gradually as age advances. Of late years also, a distinction has been made between the sexes, as most observations unite in confirming the fact, that on the average females live longer than males. The following table shows the rates at which annuities on single lives are at present granted by government:—

Life Annuities, which £100 (*Money*) will purchase when the 3 per cent. Stock, *ex dividend*, is at the following prices:—

Age of Nominee.	£99, 3s. 6d. and under £100, 16s. 10d., the rate of interest being £3 per cent.						£91, 12s. 1d., and under £93, 0s. 6d., the rate of interest being £3, 5s. per cent.						£85, 2s. 2d., and under £86, 6s. 7d., the rate of interest being £3, 10s. per cent.						£79, 9s. 5d., and under £80, 10s. 9d., the rate of interest being £3, 15s. per cent.					
	Male.			Female.			Male.			Female.			Male.			Female.			Male.			Female.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
15	4	13	0	4	6	11	4	17	3	4	11	2	5	1	6	4	15	6	5	5	10	4	19	9
20	4	17	5	4	9	7	5	1	8	4	13	10	5	5	10	4	18	0	5	10	4	5	2	3
25	5	0	2	4	12	8	5	4	3	4	16	9	5	8	6	5	0	11	5	12	8	5	5	2
30	5	4	0	4	16	6	5	8	1	5	0	7	5	12	1	5	4	7	5	16	3	5	8	9
35	5	9	6	5	1	2	5	13	6	5	5	1	5	17	5	5	9	2	6	1	7	5	13	3
40	5	17	0	5	6	8	6	0	11	5	10	6	6	4	10	5	14	5	6	8	10	5	18	5
45	6	7	5	5	13	11	6	11	3	5	17	9	6	15	1	6	1	8	6	19	1	6	5	6
50	7	2	8	6	4	1	7	6	6	6	7	10	7	10	5	6	11	8	7	14	4	6	15	6
55	8	2	1	6	18	10	8	5	11	7	2	6	8	9	10	7	6	4	8	13	10	7	10	1
60	9	5	6	7	19	2	9	9	5	8	2	11	9	13	4	8	6	9	9	17	3	8	10	6
65	11	1	0	9	8	9	11	4	11	9	12	7	11	8	10	9	16	4	11	12	11	10	0	4
70	13	9	4	11	11	6	13	13	3	11	15	5	13	17	4	11	19	4	14	1	4	12	3	4
75	16	18	0	14	11	3	17	2	1	14	15	5	17	6	1	14	19	6	17	10	1	15	3	8
80&up.	23	16	6	18	9	7	24	0	9	18	13	10	24	5	0	18	18	1	24	9	3	19	2	3

These annuities are payable half yearly, and are transferable; and upon the death of any nominee, a sum equal to one-fourth part of the annuity, besides arrears, will be payable to those entitled thereto, or their executors, provided the same shall be claimed within two years. They are sold at the National Debt Office; where tables may be obtained showing the values corresponding to all ages, and fluctuations of stock. Annuities on joint-lives, and for deferred periods, may be purchased on similar terms.

The annuities granted by insurance companies are in some cases based upon the *Northampton* table; in others, upon the *Carlisle* table, the *Government* tables, or some modification of them. [Interest and Annuities.]

In considering a life-annuity as a subject of commerce, it must be kept in view that it is susceptible of two different market prices, according as it is the purchaser or seller of the annuity that goes to market. The values stated above are applicable solely to the case of a party *wishing to purchase* an annuity. A party possessed of one on his own life, or on that of any other, *wishing to sell*, must be content to accept of a great deal less than its full value; as the contingent nature of the security, the difficulty of employing profitably capital repaid in small instalments, and other circumstances, have always depreciated the value of life-annuities, when viewed as mere objects of investment. The price at different periods depends upon the state of the money-market: but in general, a person who invests money in the purchase of annuities, demands as much as is calculated to replace the capital sum advanced by him, with interest considerably higher than the ordinary rate; formerly 8, 10, or 12 per cent. was charged; at present it is about 6 per cent. There are thus two market prices for annuities, depending upon the circumstances and necessities of the party going to market. In the first case, the *purchaser* of the annuity gets his money returned, making allowance for the chances of life, with interest at 3 per cent. or a little more; while the person who is forced to *sell* his annuity must be content to accept of such a price as will make a return to the money-dealer of about 6 per cent., exclusive of casualties. [Funds. Interest and Annuities. Reversions.]

Under the legacy act, 36 Geo. III. c. 52, annuities are valued by the Northampton table, at 4 per cent.

Redeemable Annuities are those which are redeemable on certain terms by the granter,—as by repayment of the consideration-money. Life annuities being attended with risk, are not within the reach of the usury laws, and are therefore used by landed proprietors, and others having a limited interest in their property, to evade them,—more especially when the market-rate of interest exceeds the legal rate. During the late war, the most exorbitant terms were frequently exacted for loans on annuity; and certain formalities in their creation were in consequence introduced by the act 53 Geo. III. c. 141 (explained by 3 Geo. IV. c. 92; and 7 Geo. IV. c. 75). By this statute annuity-bonds or instruments granted for *money in loan*, must be enrolled in Chancery within 30 days after their execution: it does not, however, extend to Scotland or Ireland.

ANTHAL, a Hungarian wine measure = 11⅛ imperial gallons.

ANTHRACITE is a mineral charcoal, black, light, and often with a shining surface, whence it is named *glance* coal. It is also called *blind* coal from its burning without flame. Anthracite is found in many of our coal-mines, but was little worked until lately, when its value became known in South Wales, where it is employed for smelting iron. In the United States it is used extensively, being burned in peculiar grates adapted to its difficult combustion.

ANTIGUA. [West Indies.]

ANTIMONY (Fr. *Antimoine*. Ger. *Spiesglanz*. Mal. *Soormah*. Tam. *Anjana Kalloo*), a metal extensively used in medicine; and in the arts employed in the composition of printing types, music-plates, &c. The metallic ore of commerce consists of sulphur and other impurities combined with the pure metal. This ore is found abundantly at Rosenau, in Hungary, and in other parts of Europe; but is imported into this country chiefly from the Malayan Archipelago. It is generally of a lead-gray colour, possessing considerable splendour, and is met with compact,—in acicular crystals,—and in rhombic prisms of considerable size, and variously modified. *Crude* antimony is the name given in commerce to the sulphuret of the metal, after being separated from the impurities of the ore, by fusion, and a species of filtration. It is usually in the form of loaves, of a dark-gray colour, the goodness of which is estimated from their compactness and weight, the largeness and distinctness of the striæ, and from their being entirely vaporizable by heat. *Regulus* of antimony, the pure metal after being separated from the sulphur, is commonly of a dusky-white colour, very brittle, and of a scaly texture. Sp. gr. about 6·8.

ANTWERP. [Belgium.]

APPLE (Fr. *Pomme*. Ger. *Apfel*), the well-known fruit of the *pyrus malus*, is distinguished as being at once the most brisk and refreshing of the orchard fruits of the colder climates. It is also the most generally cultivated, as it remains the longest in season, and is used in the greatest number of ways. Apples, when ripe, yield easily to the pressure of the finger at the stalk-end of the fruit. The best for table are the *Golden* and *Ribston Pippins*, and for storing for kitchen-use, the *Yorkshire Green* and *Stock Ledingtons*. The Catalogue of the Horticultural Society of London, however, enumerates more than 1200 varieties. The chief localities of this fruit in Britain, are the Cider districts in England, and Lanarkshire in Scotland. Apples are imported in considerable quantity from the Channel Islands, France, and the United States.

The wood of the apple tree is hard and heavy, and well adapted for the working parts of machinery, if not under water.

APPRAISEMENT, or **VALUATION**, is generally used to designate the estimation of the pecuniary value of estates or commodities, made by a sworn *appraiser* or valuer. By 46 Geo. III. c. 43, appraisers must take out an annual license from the excise. The act applies to "every person who shall value or appraise any estate or property, real or personal, or any interest in possession or reversion, remainder or contingency in any estate, real or personal, or any goods, merchandise or effects, of whatsoever kind or description the same may be, for, or in expectation of any hire, gain, fee, or reward, or valuable consideration to be therefor paid to him" (§ 4). The penalty for acting without license is £50 for each offence (§ 6). Licensed auctioneers may act without taking out an appraiser's license (§ 7). Each appraisement must be extended on a stamp, in terms of the statute.

APPRENTICE, an individual (generally under the age of twenty-one) who is subjected to an engagement to serve for a stipulated period under the practiser of some trade or profession, in matters referring thereto, on condition of receiving instruction in return.

In England, it is held that by the common law no man can be prohibited from working in any lawful trade at his pleasure. By the statute 5 Elizabeth, chap. 4, this freedom was restricted in so far as, with some special exceptions, an apprenticeship of seven years was necessary to enable any person "to set up, occupy, use, or exercise any craft, mystery, or occupation," and the form and manner of this engagement was strictly regulated. By 54 Geo. III. c. 96, the portion of this statute affecting apprentices was repealed, and it was declared (§ 2), "that it shall and may be lawful for any person to take, or retain, or become an apprentice, though not according to the provisions of the said act: and that indentures, deeds, and agreements in writing, entered into for that purpose, which would be otherwise valid and effectual, shall be valid and effectual in law." It was provided that the repeal should not affect the customs of the city of London, or those of any city, town, corporation, or company lawfully constituted. This latter reservation will be affected by 5 & 6 Wm. IV. c. 76, § 14, by which the exclusive privileges of corporations are abolished, and it is enacted, that "notwithstanding any custom or by-law, any person in any borough may keep any shop for the sale of all lawful wares and merchandises for wholesale or retail, and use every lawful trade, occupation, mystery, and handicraft, for hire, gain, sale, or otherwise within any borough." It is held that by the common law persons under the age of twenty-one cannot bind themselves so as to be liable to an action of covenant to fulfil the conditions, and that the father or guardian cannot bind the infant without his consent. Hence the undertaking is generally on the part of both, the parent or guardian becoming bound for the apprentice's faithful discharge of his duty. A youth, however, who has bound himself singly and fulfilled his apprenticeship will be entitled to the benefit of it. By the custom of London, an infant unmarried and above the age of fourteen may bind himself to a freeman. The covenant between the parties is contained in a mutual deed or indenture. In the city, indentures must be enrolled before the chamberlain within a year, on a petition to the mayor and aldermen, otherwise a *sciri facias* shall issue to the master to show cause why it is not enrolled; and if the omission is owing to the master, the apprentice may sue out his indentures and be discharged. The father or other person who has covenanted for the apprentice is bound for his true performance of the articles. Every indenture entered into by an infant, is voidable at his election on his attaining the age of twenty-one; but if any adult have covenanted for his performance of his duties, that person continues liable; and so it has been held that a father who had become bound for his son was not released by his son's attaining majority during the currency of the period, but was liable for his then absenting himself (Cuming *v.* Hill, 1819, 3 *B. & A.* 59). The parties becoming bound with an apprentice, generally agree to pay the master a premium or fee, as a farther remuneration for his instructing the young person. By 8 Anne, c. 9, § 39, the full "sum paid, secured, or contracted for," must be stated in the indenture, otherwise it will be void,—the temporary act 42 Geo. III. c. 23, § 7, which gave power on payment of double duty to rectify the omission, having expired. Where an indenture was void by omission of the premium, it was found that the master had no action against the apprentice's father on a promissory note given as apprentice fee, though he had maintained the apprentice till he absconded (Jackson *v.* Warwich, 1797, 7 *T. R.* 121). By the stamp laws, if "any thing, not being money, shall, directly or indirectly, be given, assigned, conveyed, delivered, contracted for, to or for the use or benefit of any master, with or in respect of any such apprentice, &c., the duties, &c. should be paid for the full value of such thing or things" (8 Anne, c. 9, § 45). This has been held not to apply to the friends of an apprentice covenanting to maintain him and supply him with clothes (Rex *v.* Leighton, 1792, 4 *T. R.* 732). Whatever an apprentice gains is gained to his master, who will not be deprived of his remedy by a defect in the contract. The contract of apprenticeship terminates by the consent of all the parties, or by the death of the apprentice, or by the death of the master. In this last case, however, though the obligation on the master to teach the apprentice is personal, and so terminates with his life, yet if he have become bound to provide the apprentice with food and clothing, his executors must fulfil the obligation in so far as they have assets. By the custom of London, it is held that, when the master dies the executors must bind the apprentice to another master in the same trade. The discharge of an apprentice requires to be in writing. By 6 Geo. IV. c. 16, § 49, the issuing of a commission (now fiat) of bankruptcy against the master operates as a discharge.

The enforcement of the mutual obligations between masters and apprentices is in a great measure committed to the Justices of Peace. By 20 Geo. II. c. 19, § 2; 33 Geo. III. c. 55, § 1; and 4 Geo. IV. c. 29, in the case of parish apprentices (see below) or those with whom an apprentice fee not exceeding £25 has been paid, the apprentice may summon his master to appear before two justices on a complaint of misusage, refusal of necessary provision, cruelty, or other ill-treatment, and the justices may discharge him by a warrant for which no fees are payable, and on consideration of the circumstances may cause the master to refund the whole or any part of the premium; or two or more justices at special or petty sessions may impose on the master a fine not exceeding 40s. On the other hand, on complaint by a master of misdemeanour, miscarriage, or ill behaviour on the part of his apprentice, two justices may commit the latter to the house of correction for a period not exceeding one month, or discharge him. [Factories.] By 6 Geo. III. c. 25, and 4 Geo. IV. c. 34, any such apprentice absconding, may be compelled to make up for the time during which he has absented himself, or be imprisoned for three months, on oath being made by the master, or any steward or overseer, to a Justice of Peace. A master cannot recall any license he may have given to an apprentice to leave him; and if the master dismiss him for negligence, he may be bound in equity to refund part of the premium. By the custom of London, a freeman may turn away an apprentice for gaming (*Burn's Justice. Sir E. Tomlin's Law Dictionary. Smith's Mercantile L.* 372-376).

Parish Apprentices are such as are bound to inhabitants and occupiers of lands and tenements within the parish by church-wardens and overseers: and by 43 Eliz. c. 2, § 5, and 18 Geo. III. c. 47, these officers are empowered, with the assent of two justices, to bind as apprentices children whose parents they judge unable to support them. But they must be bound for no longer a period than till they reach the age of twenty-one, and the engagement of a female is terminable with her marriage. By 56 Geo. III. c. 139, § 7, the child before being apprenticed must have attained the age of nine years. It is for the church-wardens and overseers, in their discretion, to find proper persons to whom they may bind parish apprentices; and the justices may compel them to receive the children, under penalty of £10 for the use of the poor, to be levied by distress and sale. The master, however, if he feel aggrieved by the order, may appeal to the sessions. Clergymen and gentlemen of fortune are liable, but officers of the army are exempted by the Mutiny Acts. Mere strangers who stand in no relation to the parish cannot be compelled to take apprentices, but occupants of lands in it, though they reside elsewhere, are liable. By 32 Geo. III. c. 57, provision is made for compelling masters to support their apprentices, and awarding punishment for ill usage; and it is enacted by § 12, that if any one is convicted of abusing his apprentice, no other shall be bound to him, but he shall be compelled to pay a composition of not more than £10 or less than £5, for the purpose of binding out any child who otherwise would be forced on him. The binding of parish apprentices is particularly regulated by 56 Geo. III. c. 139. By § 1, provision is made for preventing children from being removed to a great distance from the parochial officers and their parents, and it is enacted that an apprentice shall not be sent to an establishment out of the county, more than forty miles from his own parish, unless he belong to one more than forty miles from the city of London, in which case an apprenticeship to a greater distance may be made by special order of the justices. By the late Poor Law Act (4 & 5 Wm. IV. c. 76, § 15), the commissioners are empowered to issue rules and regulations as to apprenticeships (*Burn's Justice and Statutes quoted*).

In Scotland there has never been any general regulation enforcing apprenticeships, such as the act of 5 Elizabeth: and the conditions in each trade or profession are still regulated by their respective charters and by-laws. The period is generally five years. An apprenticeship confers no general privilege beyond the corporation of which the master is a member. It has been laid down, that the acts of parliament, giving special jurisdiction to justices of the peace in questions between master and apprentice, do not apply to Scotland (*Tait's Justice*, 4). This is undoubtedly the case with those enactments which refer to parish apprentices, of which there are none in this country, but in late cases it has been taken for granted that the act 4 Geo. IV. c. 34 embraces North Britain (Frame *agt.* Campbell, 9th June 1836, 14 *D. B. M.* 914). The stamp acts, as above referred to, apply to Scotland. The indenture must be attested by two male persons, who sign with the designation "witness" after their names, and who must have seen the principals subscribe or have heard them acknowledge their subscriptions, and whose names must be inserted in the testing clause. A minor pupil (that is, a boy under fourteen years of age, and a girl under twelve) cannot be bound, except through the engagement of a parent or guardian. A minor above pupillarity, if he have guardians, must have their consent; but if he have none, he may validly contract, though the engagement is liable to reduction on the ground of minority, and lesion, or injury to his interests. By the common law, an apprentice cannot enlist in the army, or enter the navy unless he has been bred at sea. The rule is often nullified by the annual mutiny act and other statutes (*Ersk. Inst.* I. 8. 63. *Tait's Justice of Peace. Burton's Manual*).

APRICOT (Fr. *Abricot.* Ger. *Ahprikat*), the fruit of the *Prunus Armeniaca*, a tree widely diffused in Asia, and growing in abundance upon the oases of Africa, from whence the fruit, called there *Mish-mish*, is brought in a dried state to Egypt. Various kinds are cultivated in this country, particularly in the South of England. Of those cultivated upon walls, the *Orange* is the best for preserving, and the *Moorpark* and *Turkey* for the table. The *Breda* and the *Brussels*, both well-suited for preserving, are the kinds preferred when grown upon open standard trees. The wallfruit is said to be the finest, but the other is the best flavoured.

AQUAFORTIS, a name given to impure nitric acid. [Nitric Acid.]

AQUA-MARINE. [Beryl.]

AQUA-REGIA. [Chlorine.]

AQUA, or AQUA-VITÆ, a term absurdly applied to ardent spirits.

ARABIA extends from 12° to 34° N. lat., and from 33° to 60° E. long. It is bounded N. by Turkey in Asia; W. by the Red Sea, and Isthmus of Suez; S. by the Indian Ocean; and E. by the Persian Gulf. Its area is vaguely estimated at 1,000,000 square miles, and its population at 10,000,000; composed partly of the commercial inhabitants of the coast, who form a regular society, and partly of *Bedouins* or pastoral Arabs, who live in tents, and subsist by their flocks, or by the plunder of passing caravans. Arabia is subject to a great variety of rulers. In the coast districts, monarchies, more or less extensive, have been formed. The chief of these are, Hejaz, or the Sheriffat of Mecca, now subject to the Pacha of Egypt; the Imamat of Sanaa, or kingdom of Yemen; and the Imamat of Muscat. The remainder is mostly divided among a vast number of petty sheiks, whose government resembles that which formerly prevailed among the Scottish clans. Nejd, the central part, is possessed by the Wahabees, a body of religious reformers, who, about the beginning of the present century, overran nearly the whole peninsula, but since 1818, have been confined to their original district, by the Pacha of Egypt.

Arabia is proverbially an arid barren country. Scarcely a single river exists; and almost the whole of the interior is occupied with sandy deserts,—diversified only by a few *oases* or spots of fertility. Some of the districts on the coast, however, particularly Yemen, are fertile and beautiful. The chief productions are coffee, which is grown in Yemen, at Bulgosa, near Beit-el-Fakih, gum-arabic, dates, pomegranates, figs, oranges, opobalsam, and a variety of odoriferous plants. Senna and the cotton-tree are also cultivated in Yemen; and indigo is cultivated about Zebid. There are no mines of the precious metals; but Niebuhr states that iron exists in the territory of Saade; and that the lead-mines of Oman are productive. Arabia has long been celebrated for its horses: the best are bred in the desert bordering on Syria.

The commerce of Arabia may be divided into the maritime commerce of the Red Sea, from Hejaz and Yemen; that of the Persian Gulf, from Muscat and Bussora; and the caravan trade. The three last are described under the articles Muscat, Turkey, and Caravan.

Hejaz, or Sheriffat of Mecca, comprises the N. and W. part, bordering on the Red Sea. It is the holy land of the Mohammedans, on account of its containing Mecca, the native town of Mohammed, and Medina, the city where he is interred. It is under the nominal dominion of the Grand Seignior, as protector of the holy cities, but in reality it is subject to the Pacha of Egypt. The other chief towns are Jiddah, the seaport of Mecca, and Yembo, the seaport of Medina. The maritime commerce of the country is almost all concentrated at Jiddah.

Jiddah, in 21° 29′ N., and 39° 15′ E., is described as a fine town, and perhaps the wealthiest of the same extent in the east; but the port is not commodious, and large vessels are obliged to anchor at the distance of two miles, and discharge their cargoes by boats. The population is 15,000. The inhabitants are almost all engaged in commerce, and business is transacted with punctuality and despatch. The trade is much influenced by the number of pilgrims or hajjis, who visit Mecca annually in the month Dalhajja, from all Mohammedan countries, and which, by the greater number, is made subservient to commercial purposes. It is further influenced by a regulation that prevents Yemen vessels from passing without payment of a heavy duty; in consequence of which their cargoes are generally landed, and reshipped by Jiddah merchants. The principal trade is that with India. Some vessels arrive direct from Calcutta, freighted solely with rice, sugar, and Dacca muslin; others bring blue cloths, cambric, of which the ihram is made, and indigo; the latter complete their lading on the Malabar coast with teak-timber, cocoa-nut oil, cocoa-nuts, black pepper, dried ginger, turmeric, &c. This branch of commerce is now, however, on the decline. Ships seldom leave Bombay direct for the Red Sea, unless they are small, and intended for the coasting-trade; the usual practice is to proceed to the Malabar coast, where they take in cargoes of the same articles as the Bengal ships, in addition to which, they bring annually from Bombay 400 or 500 tons of pig-lead, which is landed at Mocha, and afterwards sold to the Somaulies at Berbera. The imports from Surat consist of Cashmere shawls, tissue, flowered and embroidered muslin, and other valuable cloths, amounting yearly to about $600,000: from Bushire and Bussora, wheat, tobacco, dates, and Persian carpets for the Bedouin sheiks, in whose tents, one at least is considered as indispensable: from the Malay islands, little is brought except spices; and ships from thence complete their cargoes on the Malabar coast with rice. The returns made for these imports are mostly in cash, with a few pearls of indifferent quality, shark skins and fins, and some chests of red beads, old copper-ware, &c. All the vessels make up their return cargoes at Aden and Mocha with coffee. The coffee trade between Jiddah and Egypt has much declined since the importation of American and West Indian coffee into the ports of the Mediterranean and Levant. Corn is imported from Upper Egypt entirely on account of the Pacha. Timber for shipbuilding is supplied either from India or by way of the Nile, from the Mediterranean. The intercourse betwixt Jiddah and the opposite coast of Africa, is considerable, Indian goods, manufactures, iron, &c. being sent in exchange for ghee, mats, barley, hides, slaves, tobacco, and gold. The number of vessels belonging to Jiddah and Yembo may be estimated at from 250 to 300. (*Com. by Lieut. Wellsted, I. N. to Geo. Soc. Journal*, vol. vi.)

Measures, Weights, and Money.—The native measures cannot be stated with accuracy. The bahar of 10 frazils, 100 maunds, or 200 rattles = 222½ lbs. avoird. Accounts are kept in cruse of 40 duanees; 25 cruse pass for about 100 Spanish dollars. Of late years, the Egyptian measures, weights, and monies, have been much used.

Imamat of Sanaa.—This state comprises the principal part of Yemen, situate in the S. and W. part of Arabia bordering on the Red Sea. The area is vaguely estimated at 52,000 sq. miles, and pop. at 1,000,000. It is subject to an imam, a kind of hereditary monarch, whose capital is Sanaa, pop. 30,000; but the commercial emporium of the country is Mocha.

Mocha, in 13° 20′ N., and 43° 20′ E., is the principal port in the Red Sea frequented by Europeans, pop. 5000. It is situate about 40 miles N. of Cape Bab el Mandeb, between two projecting points of land, which shelter vessels whose draught (if not more than 10 or 11 feet) allows them to anchor within a mile of the town; large ones lie further out, and are exposed as in an open road. Provisions are here plentiful and cheap, but good water is scarce. The principal article of export is coffee; the others are gum-arabic, tragacanth, myrrh, frankincense, civet, balsam, dates, acorus, rhinoceros' horns and hides, sagapenum, salep, senna, and sharks' fins. The imports consist principally of rice, ghee, iron, hardware, and other manufactures. The foreign trade is transacted chiefly by Banians. All produce is sold by tale or weight, at so much the Spanish dollar. According to Mr Milburn (*Oriental Commerce*), the duty payable on exports and imports by the British is 3 per cent. *ad valorem*, besides brokage and shroffage.

Measures and Weights.—The covid = 19, and the guz = 25 Imp. inches; the gudda of 8 noosfias = 1·8 Imp. gall.; and the tomand, dry measure, containing 40 kellas, weighs of rice 168 lbs. avoird. The bahar of 15 frazils, or 150 maunds = 450 lbs. avoird. The miscal of 1½ coffola, or 24 carats = 73·37 troy grains; 10 coffolas = 1 vakia; and 87 vakias = 100 Spanish dollars weight.

Money accounts are kept in piastres, or Mocha dollars of 80 cavears; and as 121½ piastres = 100 Spanish dollars (in which payments are made), the piastre is worth about 3s. 5d. sterling. The native coins are, commasses of 7 carats; 40 commasses generally pass for a dollar.

ARANGOES, large beads formed from rough carnelian, formerly much used in the African slave trade.

ARBITRATION, a contract by which two or more parties engaged in a dispute agree, by an instrument called a submission, to leave the decision to a third party, called an arbiter or arbitrator. The submission is generally in the form of mutual bonds, binding each to obey the award under penalties. In contracts of partnership, it is usual to insert conditions of arbitration which have the effect of preventing one member from resorting to a lawsuit, unless a reference has proved ineffectual, or the others have refused to accede to it. Where the submission, as was frequently the case, came into existence in the course of a litigation, the English courts adopted the practice of enforcing the decision of the arbiter, as against litigants before the court, and by 9 & 10 Wm. III. c. 15, the same privilege was extended to all formal written submissions. The proper subjects of arbitration are those questions as to fact, which are generally referred to a jury,—a liquid debt specified and defined by deed is therefore not a proper subject. Where there is more than one arbiter, there is generally authority to choose an umpire if they cannot come to a decision,—and this last must be selected by voluntary choice, not by lot. The object of arbitration is a final determination, and so a reservation is void. An award to do an illegal act, or one which cannot be done by the party, is void. The courts exercise considerable discretion in overlooking minute deficiencies, and allowing the evident meaning and intention of the various parties to be put in practice; and though an award be void as to some portion of it, yet if it be specific in assigning to the parties the rights which the arbiters intended to bestow on them, it will be good as to the remainder. When a time is limited for making an award it cannot be protracted, except by prolongation consented to by parties, or permitted by rule of court. The courts will not relieve a person who has voluntarily submitted his case to an arbiter from the consequences of the decision, unless on grounds of corruption, partiality, or mistake. The law of Scotland as to arbitration, in principle resembles that of England. If the submission contain a clause of registration the decree-arbitral can be enforced as if it were the decree of a court. (*Caldwell on Arbitration. Parker on Arbitration.*)

ARBITRATION OF EXCHANGE, the deduction of a proportional or *arbitrated rate* of exchange between two places through an intermediate place, in order to ascertain the most advantageous method of drawing or remitting. [Exchange.]

ARCHANGEL. [Russia.]

ARCHILL. [Orchill.]

ARCHIM, or PIK, the Turkish ell, is equal ¾ Imp. yard nearly.

ARE, the unit of the French measures of surface, equal to 100 square metres, or about 1076 British square feet.

ARECA-NUT. [Betel-Nut.]

ARGENTINE REPUBLIC. [Buenos Ayres.]

ARGOL, a common name for crude Tartar, in the state in which it is taken from the inside of wine vessels. [Tartar.]

ARISTOLOCHIA, or SNAKE-ROOT (Fr. *Serpentaire de Virginie*. Ger. *Virginische Schlangenwurzel*), the dried root of the *A. serpentaria* or Virginian snake-root. It consists of a short stock or head, with numerous rootlets three inches or more in length, thready, interlaced, and brittle; skin greenish yellow or brown, and pith iron-coloured. In odour and taste it resembles valerian and camphor. The root is all used, but the rootlets are more powerful than the solid part. It is employed in medicine, and its action is similar to that of camphor. Aristolochia is imported into this country from Virginia and Carolina. (*Duncan's Dispensatory.*)

ARITHMETIC, COMMERCIAL. [Alligation. Average. Discount, &c.]

ARMS and AMMUNITION. [Gun. Gunpowder.]

ARNOTTO. [Annatto.]

ARPENT, a land-measure in the old French system. The *Arpent des eaux-et-forêts* = 51·07 ares; the *Arpent de Paris* = 34·19 ares; and the *Arpent Commun* = 42·22 ares, or 1 British acre and 7 perches. The *Arpent of Geneva* = 51·66 ares, or 6179 British square yards.

ARRACK (Du. *Arak*. Fr. *Arac*. Por. *Araca*), an oriental name for spirituous liquors of all kinds, but in this country applied generally to those distilled in India and the adjoining regions. Arrack was formerly prepared in considerable quantity at Goa, but the principal seats of the manufacture at present are, the islands of Java and Ceylon. In the former, it is commonly termed *kneip*, and is made from a mixture of 62 parts molasses, 35 parts rice, and 3 parts of the sweet juice called palm-wine or toddy, extracted from the flowers of different species of palm-trees. In the latter, it is entirely distilled from cocoa-nut tree toddy. Ceylon arrack is reckoned superior to that of Java; and in India, to which very large quantities are annually exported, it brings a price 10 or 15 per cent. higher. The prime cost of arrack at Columbo varies from 8d. to 10d. per gallon. In India, it is prepared from the flowers of the *Bassia longifolia*, the *Mahwah* tree, and the *Bassia latifolia*. In Turkey, it is distilled from the skins of grapes, and flavoured with aniseed. (*Milburn's O. C.*)

ARRANZADA, a Spanish land-measure, estimated, for vineyard land, equal to 3 Imp. roods 33 poles nearly.

ARRATEL, the Portuguese pound = 7083 troy grains; and 98⅝ arratels = 100 lbs. avoird.

ARRESTMENT AND FORTHCOMING in Scotland, like foreign attachment in England [Attachment], is a process by which a creditor can lay an embargo on money due to his debtor by a third party, or on moveable property belonging to the same in the hands of such a party. If the debt has not been constituted by the decision of a court, the arrestment may be loosed if the debtor find security to pay. While the arrestment is in full force, if the person in whose hands it is taken pay his debt, or make over the property arrested to the arrester's debtor, he becomes liable for the debt. This process has of late been materially facilitated by the act 1 & 2 Vict. c. 114.

ARROBA, a Spanish and Portuguese weight; also a Spanish measure of capacity. It varies in different places. The *Arroba Weight*,—Spanish standard = 25·36 lbs. avoirdupois; Alicant = 27·38 do.; Valencia = 28·25 do.; Arragon = 27·76 do.; Portugal = 32·38 do. The *Arroba Measure of Capacity*,—Spanish standard for wine = 3·54 Imp. galls., and for oil = 2·78 do.; Malaga = 3·49 do.; Valencia = 2·59 do.; Canaries = 3·54 do.

ARROW-ROOT, a farinaceous substance procured in America, the West Indies, and Ceylon, from the root of the *Maranta arundinacea*; and in India, from the tubers of the *Curcuma angustifolia*. It is prepared in nearly the same manner as starch; and when good, should be free from all musty flavour, white, insipid, and form a consistent jelly when dissolved in eight parts of boiling water. (*Brande's Pharmacy.*) It retains its nourishing property unimpaired for many years. Arrow-root forms a common article of food for children and invalids; and about 900,000 lbs. are now annually imported into this country, chiefly from the British West Indies, and very little of it is re-exported. The best is brought from the Bermudas, New Providence, and Ceylon. It is frequently adulterated with potato starch, and great care is necessary in purchasing it.

ARSENIC (Fr. *Arsenic, Arsenic oxyde natif*. Ger. *Arsenik, weisse Arsenik*. It. *Arsenico, Arsenico üxneo*), an exceedingly brittle metal, of a strong metallic lustre, and white colour, running into steel-gray. Sp. gr. 5·9. This substance, however, being very soft, is of little value, and is not used in the arts. The arsenic of commerce is the *white oxide* of that metal, or more correctly *arsenious acid*, a compound which is obtained chiefly in Bohemia and Saxony, in roasting the cobalt ores for making zaffre, and also by sublimation from arsenical pyrites. It is brittle, white, faintly sweetish in taste, more or less translucent, and is generally met with in cakes or their fragments, retaining the shape of the subliming vessel; sometimes it has a yellow or reddish tinge owing to the presence of iron, sulphur, and other impurities; from these it is freed for pharmaceutical use by resublimation, when it is often obtained in vitreous transparent cakes, which, however, soon grow opaque and crumble. Sp. gr. 3·72. In the shops it is commonly offered for sale in the form of a fine smooth powder, which is liable to adulteration with chalk and gypsum; but the fraud is easily detected by exposing the suspected substance to heat, when the pure acid is entirely sublimed, and the additions remain. Arsenious acid, though one of the most virulent poisons, is used in medicine. It is also employed as an ingredient in *Scheele's Green* and other dyes, and in the manufacture of flint-glass. Arsenic forms with sulphur two compounds, which are known in commerce under the names of REALGAR and ORPIMENT.

ARSHEEN, OR ARCHIN, a Russian cloth measure = 28 Imp. inches or 0·71 French metre.

ARTABA, a Persian measure of capacity = 2 Imp. bushels nearly.

ARTICHOKE (Fr. *Artichaut*), an esculent vegetable (*Cynara scolymus*), having large perennial roots and annual stems, bearing large round heads. Each of these is composed of numerous oval calycinal scales, enclosing the florets, sitting on a broad fleshy receptacle; this and the fleshy base of the scales, being the only eatable parts of the plant, are gathered before the expansion of the flowers.

Jerusalem Artichokes are the tubers of the *Helianthus tuberosus*, a kind of sunflower. This name is due to its strong resemblance in taste to the real artichoke.

AS, a denomination given to the ancient Roman *libra*, or pound of 12 *unciæ*; also to the principal Roman coin. This last was composed chiefly of copper; and when first issued in the reign of Servius Tullius (B.C. 560) contained a pound of metal; but the weight was gradually diminished, until by the Papirian law (B.C. 178), asses of half an ounce were coined. This rate was continued till Pliny's time (A.C. 70), and long after. The weight and value of the as, at different periods, is however a subject of much difference of opinion among antiquaries.

ASARABACCA (Fr. *Asaret*. Ger. *Haselkraut*), the root and leaves of the *Asarum Europæum*, a perennial plant indigenous in Britain, but generally imported from the Levant. It contains a camphor-like principle, and a bitter essence which is combined with gallic acid. It is used in veterinary medicine, and also as an ingredient in most of the cephalic snuffs.

ASBESTUS, OR AMIANTHUS, a mineral in silky filaments, which, when mixed with oil, may be woven into a fire-proof cloth. Localities, Portsoy and Glenelg in Scotland, St Neverne in Cornwall, Corsica, and U. S. of America, where it is sometimes used as lamp-wick.

ASCENSION, a small island of volcanic origin, lying in 7° 56′ S., and 14° 24′ W., about 685 miles N.W. of St Helena, and 1450 from the W. coast of Africa. Length 8 miles; breadth 6. It belongs to Britain; and, being at present used as a store depôt for the African squadron, is occupied by a detachment of marines, who are chiefly employed in rendering available its scanty resources for supplying the shipping with provisions and water.

Ascension lies within the immediate influence of the S.E. trade-wind; and as it is directly in the track of ships on their passage home from the East. such as do not touch at the Cape or St Helena, usually call here for refreshments. The roadstead at *Georgetown* offers secure anchorage. This island was for a long time chiefly celebrated in the "Almanac des Gourmands," on account of the abundance of turtle found on it. The season for catching them is between February and July; and their usual weight is from 400 to 700 lbs. "The turtle of Ascension, when scientifically served up, is esteemed of high and undoubted merit; but it is in general too large to reach England."

ASH, a tree of which there are many varieties. The common ash (*Fraxinus excelsior*) is one of the most useful of the British forest trees, on account of its rapid growth, and the excellence of its hard tough wood. The timber of the common ash is that chiefly used for agricultural implements. It is also esteemed for the purposes of the coachmaker, cooper, and turner; and for ladders, poles, and other purposes which require strength, elasticity, and comparative lightness; while the underwood is excellent for hoops, rods, hop-poles, &c. It is, however, quite unsuitable for building purposes, as it neither stands moisture nor the weather. Of the known foreign species, the white American (*F. Americana*) is the only one that rivals the common ash in value. It abounds chiefly in New Brunswick, Canada, and the adjoining parts of the United States.

ASHES. [Potash. Barilla. Kelp, &c.]

ASHLAR, a name given to rough stones; and to freestones when they are first taken out of the quarry. The term is also applied to a facing made of squared stones.

ASPARAGUS (Fr. *Asperge*), a well-known esculent vegetable (*Asparagus officinalis*), having a perennial root and annual stalks. The stems are cut for use when only a few inches above ground. There are two varieties,—the green and the red; the former is considered the best flavoured, but the latter, owing to its larger size and showy appearance, is more esteemed by gardeners.

ASPER, a small Turkish coin and money of account, equal at Constantinople to about the 100th part of a piastre. This proportion, however, varies in different places.

ASPHALTUM, a species of bitumen produced by the decomposition of vegetable matter. It is solid, brittle, of a black colour, vitreous lustre, and conchoidal fracture. It melts easily, and is very inflammable,—burning when pure without leaving ashes. Sp. gr. about 1·5. It abounds on the shores and surface of the Dead Sea, in Barbadoes, and in Trinidad, where it fills a basin of three miles in circumference. It also occurs in various parts of Britain and other countries. Asphaltum is sometimes employed, when mixed with grease, for a coating to ships, in place of tar; and a mastic or cement composed principally of it, has of late been used as a material for roofs and pavements.

ASS, a domestic quadruped resembling the horse, but much inferior to that animal, both in beauty and utility. The ass has nearly the same mouth-marks as the horse,—takes from 2 to 3 years in growing, and lives from 25 to 30. It is less subject to disease than the other, and being content with scanty and coarse fare, is employed in this country by poor people in drawing small carts, and in carrying burdens; the female is, besides, valued for her milk. The abject condition of this creature in northern climes is in part owing to its never being the subject of attention. In eastern countries, particularly in Arabia, where the breed is not only carefully tended, but frequently improved by intercourse with the fleet and fiery onagar (or wild ass), it is an animal of great strength and considerable beauty.

ASSAFŒTIDA (Fr. It. & Por. *Assafetida*. Ger. *Stinkander Asand*. Arab. *Hiltect*. Pers. *Ungooseh*), a medicinal gum-resin, composed of the juice of the roots of the *Ferula assafœtida*, a large umbelliferous plant growing in the provinces of Khorassan and Laristan, in Persia. In its recent state it is white and semi-fluid, but by exposure to the sun it gradually hardens, and assumes a reddish colour. It is imported into this country by way of India, and in trade is met with in large irregular agglutinated masses of a waxy consistence, having a motley appearance owing to the mixture of white drops with others of a violet, red, and brown tint. It has a nauseous alliaceous smell, and a bitterish acrid taste. Those masses are to be selected which are clear, of a pale reddish colour, and variegated with a number of elegant white drops or tears. An inferior kind, full of sand and very fœtid, is said to be a compound of garlic, sagapenum, turpentine, and a little of the real gum. Assafœtida loses some of its smell and strength by keeping; it should, therefore, be preserved in bladders shut up in tin boxes, and kept apart. (*Duncan's Dispensatory*. *Brande's Pharmacy*.)

ASSAY, or ASSAYING (Fr. *Coupellation*. Ger. *Abtreiben auf der capelle*), a process by which the quality of gold and silver coin, plate, or bullion, is determined.

ASSETS, from the French *assez*, is used in England to signify goods *enough* to discharge the burden which is cast upon the executor or heir, of satisfying the debts and legacies of the testator or ancestor. They are divided into personal and real. The latter were not applicable to pay simple contract debts, until the passing of the act 3 & 4 Wm. IV. c. 104, intituled, "*To render Freehold and Copyhold Estates Assets for the Payment of Simple and Contract Debts.*" On this subject, see *Ram's Treatise of Assets, Debts, and Encumbrances.* The word assets is employed in a more general sense to designate property presumed to be set apart to meet any obligation; thus the acceptor of a bill is said to have assets of the drawer in his hands. It is also commonly used in trade to designate the funds, or property in possession of a merchant, in contradistinction to his *liabilities* or obligations.

ASSIGNATS, the paper-money issued in France after the Revolution. The want of public confidence and stagnation in trade, caused by that event, having led to the withdrawal of nearly all the current coin, the revolutionary government, with the view of providing a substitute, and at same time creating a market for the confiscated property possessed by them, issued notes in the following form:—"*National Property Assignât of* 100 *francs.*" These notes were a legal tender; but they differed from every other paper currency in not even professing to represent any specified thing; the relation of "National property" to 100 francs obviously depending on the comparative quantity of the property purchasable, and the number of assignâts issued, neither of which was defined. The first issue was in May 1790, to the extent of 400 millions of francs, which bore interest by the day, like Exchequer bills. To this was added 800 millions in September 1790, without the liability to pay interest. The government, finding this an easy method of supporting their treasury without new taxes, seized every opportunity to increase their issues, so that in 1793 they amounted to 3626 millions; in 1794, to 8817 millions; in 1795, to 19,700 millions; and lastly, in September 1796, to 45,579 millions of francs, or the immense sum of £1,823,160,000. These excessive issues produced a rapid depreciation in the value of the paper, so that in 1796, an assignât of 100 francs, professing to be worth £4, was currently exchanged for 5½ sous, or less than threepence. Having thus sunk below 1-300th part of their nominal value, they were called in,—the government offering to take them at 1 per cent. in payment of a forced loan, which was imposed in money, and to give *mandâts*, a new species of paper-currency, in exchange for them, at the rate of 3 per cent. The ultimate result was, that of the whole 45,579,000,000, 12,744,000,000 were in some way or other discharged; the remaining 32,835,000,000 continued waste-paper in the holders' hands. The mandâts were of the nominal value of 2,400,000,000 francs (or £96,000,000); but they came out at a discount, and gradually sunk to less than 1-70th of their nominal value. They were issued June 9, 1796, and extinguished, partly in the purchase of confiscated property, and partly in the payment of taxes, before the end of the following September.

This financial bubble produced more profligacy, injustice, and misery, throughout France, than all the proscriptions and sanguinary violence of the Reign of Terror. "Every body," says Mr Senior, "taxed his ingenuity to find employment for a currency of which the value evaporated from hour to hour. It was passed on as it was received, as if it burned every one's hands who touched it." "Those who depended on fixed money payments were reduced to beggary; and beggary at periods of general distress, is starvation. Every morning there were found in the waters, and on the shores of the Seine, the bodies of wretches who had preferred death by suicide to death by starvation. The state of the labouring classes was scarcely more tolerable." The revolutionary convention made efforts equally violent and senseless, to prevent the constantly increasing depreciation of assignâts in metallic money and in commodities; the rate at which corn, provisions, fuel, clothing, and other necessary articles, were to be exchangeable for assignâts, was fixed by law; and fine, imprisonment, confiscation, and death, were substituted for the ordinary motives to commercial transactions. Of course, the majority of the shops were shut; and in those which continued open, only the worst articles were exposed to sale. The bakers' shops were the principal subjects of legislation. They were not to be entered without a certificate; and a long rope was extended from the counter into the street, which the file of candidates for purchase were to lay hold of, in order to ensure their entering the shop in fair succession. Many, however, spent whole nights in the street, in vain attempts to make their entrance; and sometimes the feeble were suffocated or trampled to death in the consequent struggles. At length the Convention felt the impossibility of using fear instead of hope as the motive of production and exchange; and their coercive laws were abandoned; but not without leaving on the minds of the French people a prejudice against the use of paper-money which has continued to the present time. (*Senior on Money*, p. 78. *Storch*, *Economic Polit.* v. 4. p. 164.)

ASSIGNÊES, in the law of bankruptcy, are the persons to whom the realization, management, and distribution of the estate of a bankrupt are committed, subject to the control of the court of bankruptcy. They are either official, provisional, or chosen.

Assignees, Official, are officers of the court of bankruptcy, appointed to cooperate in town bankruptcies with the assignees chosen by the creditors, to prevent loss to the estate from the fraud, insolvency, or negligence of the latter. They were brought into existence by the Bankruptcy Court act, 1 & 2 Wm. IV. c. 56. They are appointed by the Lord Chancellor, to the number of thirty, and must consist of "merchants, brokers, accountants, or persons who are or have been engaged in trade in the city of London or Westminster, or the parts adjacent." One official assignee must act with the others chosen by the creditors; and in this capacity he is subject to the regulation of the Chancellor and the Court of Bankruptcy. The official assignee acts alone till the creditors have made their election. All the personal estate, and the rents and profits of the real estate, and the proceeds of sales vest in the official assignee alone, unless it be otherwise directed by the Court of Bankruptcy. He must deposit in the Bank of England, to the credit of the accountant-general, "all stock in the public funds or in any public company, and all monies, exchequer bills, India bonds, or other public securities, and all bills, notes, and other negotiable instruments," to be subject to the order of the court. On neglect of the above rule, he is liable (as in the case of the assignees chosen by the creditors) to be charged interest on the property at the rate of 20 per cent. Official assignees must not interfere with the assignees chosen by the creditors, "in the appointment or removal of a solicitor or attorney, or in directing the time and manner of effecting any sale of the bankrupt's estates or effects." (1 & 2 Wm. IV. c. 56, §§ 22, 23; 6 Geo. IV. c. 16, § 104.)

Assignees, Provisional.—These are appointed in country bankruptcies by the commissioners, to act until assignees are chosen. If the creditors choose others at the meeting set apart for the purpose, the provisional assignees must deliver up the estate to them, and are subject, on delay for ten days after notice, to forfeit £200 (6 Geo. IV. c. 16, § 45). Lord Henley observes that the choice of provisional assignees "ought not to be adopted, unless an extent is apprehended, or it is intended to carry on the trade; and if executed without necessity it will not be allowed in the bill of costs." (*Henley's B. L.* 78.)

Assignees, Chosen, are the persons to whom the realization, management, and distribution of the bankrupt estate is intrusted, subject to the control of the commissioners and the court. In town bankruptcies, they act in concert with the official assignee as stated above. When the commissioners used to advertise three public meetings for the bankrupt to surrender and conform, the assignees were chosen at the second; and the number being limited to two by 1 & 2 Wm. IV. c. 56, § 20, the choice takes place at the first. The election is decided by a majority of the creditors who have proved to the amount of £10 and upwards. Votes may be given by authority of letter of attorney on proof of the execution, either by affidavit before a Master in Chancery, or parole oath before the commissioners; and, in the case of the creditor residing out of England, by oath before a magistrate duly attested by a notary-public, British minister, or consul (6 Geo. IV. c. 16, § 61). The first duty of the assignees is to satisfy themselves that the bankruptcy is valid, and to this end they are entitled to all serviceable information from the petitioning creditor. Where there are ascertained defects, the assignees may apply to have the bankruptcy superseded, but such applications are received with jealousy. By 1 & 2 Wm. IV. c. 56, § 22, a considerable portion of the powers and duties of the chosen assignees is transferred to the official assignees in town bankruptcies; in country bankruptcies they still subsist as defined by 6 Geo. IV. c. 16. By that act (§ 101) they must keep an account in which is entered all property received from, and all payments made to account of, the bankrupt estate, to be open to the inspection of the creditors at all reasonable times. The commissioners may at any time summon assignees before them, and require them to produce all books, papers, deeds, writings, and other documents relating to the bankruptcy, in their possession, and may enforce their order by warrant and imprisonment if necessary. The majority at the meeting for choosing assignees may determine how and where the money received from time to time is to be deposited, and on their not so determining, the commissioners are to direct. No money is to be paid into the hands of any commissioner, or the solicitor of the bankruptcy, or of any company in which a commissioner, an assignee, or the solicitor is interested (§ 102). Commissioners may direct money to be invested in exchequer bills, and how such exchequer bills are to be administered (§ 103); and any assignee retaining in his own hands, or employing for his own benefit, money to the extent of £100, or countenancing any other assignee in doing so, or neglecting when directed to invest money in exchequer bills, becomes chargeable with 20 per cent. interest on the amount during the period of misapplication (§ 104). If an assignee, being debtor to a bankrupt estate for money so misapplied, become bankrupt, his certificate can only have the effect of freeing his person from imprisonment, but his future effects (tools of trade, and necessary household goods, and wearing apparel of himself and family excepted) remain liable for the debt with interest (§ 105). Assignees are entitled to charge expenses necessarily disbursed on the bankruptcy. "As, on the one hand, they may not devolve upon an accountant duties which they are themselves competent to discharge, so, on the other hand, if they cannot do their duty to the creditors without calling in the aid of an accountant, they are justified in calling in such aid" (*Henley's B. L.* 213). Where an assignee is an accountant, he is not entitled to charge for business done in that capacity. A majority of the assignees choose the solicitor of the bankruptcy, who ought not either to be one of their number, or the private agent of the bankrupt. The assignees are liable to him for reimbursement and remuneration. Assignees, commissioners, and the solicitor are alike incapacitated from being purchasers of any part of the bankrupt estate, or of dividends. Assignees may, with approbation of the Subdivision Court, appoint the bankrupt to superintend the management of the estate, or to carry on the trade for the behoof of the creditors (1 & 2 Wm. IV. c. 56, § 35). At the meeting for the last examination of the bankrupt, the commissioners appoint a public meeting not less than four months after the date of the fiat, and not more than six months after that of the meeting (of which twenty-one days' notice must be given in the Gazette), to audit the accounts of the assignees, who must deliver a state on oath of all monies received by them, and when and on what account the same have been employed, and the commissioners examining the accounts must ascertain what balances have been in hand from time to time, and whether any sum appearing in hand ought to be retained. The assignees may be examined on oath touching the truth of the accounts (6 Geo. IV. c. 16, § 106). The Court of Review has power to remove any assignee without appeal (1 & 2 Wm. IV. c. 56, § 36). Assignees are of the nature of trustees, each is responsible only for his own acts, and there is contribution between them to reimburse an assignee for payments occasioned by their joint acts.

Vesting and Disposal of Bankrupt Estate.—Previously to the Bankrupts' Court Act the estate and effects of the bankrupt were assigned, with the exception noticed below, by the commissioners acting in the commission. By 1 & 2 Wm. IV. c. 56, §§ 25, 26, all the bankrupt's personal estate, and all his real estate in the united kingdom and the colonies, vests in the assignees by their appointment, without any deed of conveyance. When, according to the laws of the place where the real property is situated, a conveyance requires to be recorded, the certificate of the appointment of the assignees is registered (§ 27). The above provisions refer to those species of property which, by 6 Geo. IV. c. 16, were appointed to be assigned by the commissioners. From this method of disposal estates tail in England and Ireland, and copyholds, were excepted, the commissioners being authorized to sell them for the benefit of the creditors (§§ 65, 68), and by the Fine and Recovery Act, 3 & 4 Wm. IV. c. 74, the disposal of estates tail by the commissioners is facilitated. By 6 Geo. IV. c. 16, § 77, all powers vested in the bankrupt which he might execute for his own benefit (except the right of nomination to any ecclesiastical benefice) may be executed by the assignees for behoof of the creditors. Where the bankrupt is invested with property in trust for the use of others, the court, on petition, will direct the assignees to transfer the same to proper persons for behoof of those interested (§ 79). Where the bankrupt holds any government stock, funds, or annuities, or the stock of any public company in the United Kingdom, the commissioners may in writing direct the persons whose consent is necessary to that end, to transfer the same to the name of the assignees, and those acting in virtue of such direction are indemnified (§ 80). Where the bankrupt has pledged property or deposited deeds subject to redemption, the assignees may, before the time of performance, fulfil the condition of redemption, as completely as the bankrupt might have done, and may dispose of the property recovered, in the usual manner (§ 70). "If any bankrupt, being at the time insolvent, shall (except upon the marriage of any of his children, or for some valuable consideration) have conveyed, assigned, or transferred to any of his children, or any other person, any hereditaments, offices, fees, annuities, leases, goods, or chattels, or have delivered or made over to any such person any bills, bonds, notes, or other securities, or have transferred his debts to any other person or persons, or into any other person's name, the commissioners shall have power to sell and dispose of the same as aforesaid; and every such sale shall be valid against the bankrupt, and such children and persons as aforesaid, and against all persons claiming under him" (§ 73).

By § 72, "If any bankrupt, at the time he becomes bankrupt, shall, by the consent and permission of the true owner thereof, have in his possession, order, or disposition any goods or chattels, whereof he was reputed owner, or whereof he had taken upon him the sale, alteration, or disposition as owner, the commissioners shall have power to sell and dispose of the same for the benefit of the creditors under the commission: Provided that nothing herein contained shall invalidate or affect any transfer or assignment of any ship or vessel, or any share thereof, made as a security for any debt or debts, either by way of mortgage or assignment, duly registered according to the provisions of an act of parliament made in the fourth year of his present majesty, intituled *An Act for the Registering of Vessels.*" The act alluded to is 4 Geo. IV. c. 41, for which 3 & 4 Wm. IV. c. 55 (see § 43) is now substituted. [REGISTRY.] The property to which the foregoing enactment applies must come within the definition of personal goods and chattels, such as ships, furniture, utensils in trade, stock, bills of exchange, policies of insurance, shares in public companies and in newspapers, &c. "Chattel interests in lands, houses, and things affixed to the freehold, or shares in a company seised of real estate, are not within the statute" (*Henley's B. L.* 270). The provision only applies to property in hand at the time of the act of bankruptcy, and not to goods received before or obtained after it. It has been laid down, that a removal on the day of the bankruptcy does not take the property out of the statute, and the same was held where goods were fraudulently removed on the day before (Darby *v.* Smith, 1798, 8 *T. R.* 82). The possession must be with "consent and permission" of the owner, and so the property of infants incapable of consenting, or fraudulently obtained, is not within the statute. The interim possession by a carrier through whom the bankrupt has sent goods, does not alter the reputed ownership, but that of a pawnee holding in pledge does. Property deposited for a particular purpose is not held within the statute; thus, bills lodged with a banker for the purpose of obtaining payment do not vest, but it is otherwise where they are not remitted for a particular purpose, but to be discounted and credited to the remitter. Goods in the hands of a factor do not pass to his assignees, but those on sale and return are within the statute. The question of reputed ownership is generally a question of fact for the consideration of a jury.

Among the other effects of the bankrupt, which vest in the assignees are, 1*st*, Property in right of his wife, unless she hold it by the custom of London as a sole trader, or it is settled to her separate use. 2*d*, Choses in action, including whatever right existed in the bankrupt to sue for performance of beneficial contracts, and for remedy of wrongs committed as against his property, but not of personal wrongs. By 6 Geo. IV. c. 16, § 76, where the bankrupt has entered on an agreement to purchase an estate or interest in land, the vender may require the assignees to choose whether they shall perform the agreement or not, and if they do not make their election, he may apply to the court for restoration of the property. 3*d*, Advowsons, which may be sold for behoof of the creditors, but if a vacancy occur before the sale, the bankrupt presents. 4*th*, Leases. On this subject we take the following remarks from Mr Smith: "The assignees are not bound to accept a term for years belonging to the bankrupt; for it might be burdened with rent and covenants beyond its value, and prove a loss instead of a benefit to the creditors. Such an estate, till they have done some act to manifest their acceptance of it, remains in the bankrupt, subject to the right of the assignees to adopt it. It has frequently become a question, what acts will amount to such an adoption. The general rule is, that any intermeddling with the estate, in the capacity of owner, amounts to an adoption of it; but not a mere experiment to ascertain its value. Thus, where the assignees entered and kept possession of the premises for three months, they were held to have adopted the lease, though the bankrupt's effects were on the premises during that period, and immediately after the sale they delivered up the key. But they were held not to have adopted the term, by advertising it for sale, without stating it to belong to them, nor by or for whom it was to be sold, but only that there was a saleable term; for that might be a mere experiment to ascertain its value.

"The lease remaining in the bankrupt till the assignees' election, he would, in the mean while, and afterwards, in case of their refusing it, be liable to rent, and would be chargeable on his express covenants, whether the assignees accepted the lease or declined it. However, by st. 1 Geo. IV. c. 16, § 75,

"'A bankrupt entitled to any lease or agreement for a lease, if the assignees accept the same, shall not be liable to pay any rent accruing after the date of the commission, or to be sued in respect of any subsequent non-observance or non-performance of the conditions, covenants, or agreements therein contained; and if the assignees decline the same, shall not be liable as aforesaid, in case he deliver up such lease or agreement to the lessor or such person agreeing to grant a lease, within fourteen days after he shall have had notice that the assignees shall have declined as aforesaid; and if the assignees shall not (upon being thereto required) elect whether they will accept or decline such lease or agreement for a lease, the lessor or person so agreeing as aforesaid, or any person entitled under such lessor or person so agreeing, shall be entitled to apply by petition to the Lord Chancellor, who may order them so to elect and to deliver up such lease or agreement, in case they shall decline the same, and the possession of the premises, or may make such other order therein as he shall think fit.'

"This section applies only to the case of a lessee, not to that of the assignee of a lessee. And though the bankrupt, complying with the provisions of the act, cannot be sued for any breach of covenant subsequent to the date of the fiat, and is discharged from his express covenants contained in the lease, although he should come in again as the assignee of his own assignees; yet a surety for the performance of those covenants is liable for breaches accruing between the date of the commission and the delivery up of the lease. The assignees, as they may if they please repudiate the lease, so, if they do, are not allowed to take advantage of any covenants contained in it. If they accept it, they may, like ordinary assignees, exonerate themselves from future liability by assigning it over even to an insolvent person" (*Smith's Mercantile L.* 567-569).

By 6 Geo. IV. c. 16, § 88, the assignees, with consent of a majority in value of the creditors assembled at a general meeting called on twenty-one days' notice in the Gazette, may compound with any debtor to the estate, or submit any dispute to arbiters to be chosen by the assignees and the majority in value on the one hand, and the person with whom they are in dispute on the other; "provided that if one-third in value or upwards of such creditors shall not attend at any such meeting (whereof such notice shall have been given as aforesaid), the assignees shall have power, with the consent of the commissioners, testified in writing under their hands, to do any of the matters aforesaid." By 1 & 2 Wm. IV. c. 56, § 43, the arbitration may be made a rule of court. [ARBITRATION.]

It is the duty of the assignees to bring the estate recovered to sale without unnecessary delay; and with this branch of management, the official assignee is prohibited from interfering (1 & 2 Wm. IV. c. 56, § 23). It is a general rule that the creditors not only as a body, but as individuals, are entitled to insist on a speedy realization of the property; and if assignees delay to make sale, though in opposition only to one individual, they will incur responsibility. However advantageous it may appear, a creditor cannot be dragged into a speculation which may render the returns from the estate future and uncertain, and it has been laid down that the assignees under a separate bankruptcy against one partner, cannot engage in a new adventure with the solvent partner, without the consent of every one interested in the estate (*Chancellor's opinion*, Crawshay *v.* Collins, 1808, 15 *Vesey*, 228).

For the auditing of assignees' accounts and the payment of dividends, see BANKRUPTCY.

The Court of Review has power to remove assignees on its own discretion, and without appeal (1 & 2 Wm. IV. c. 56, § 36). Assignees have been removed for purchasing part of the bankrupt estate, and for permanently residing beyond the jurisdiction of the court. On removal of an assignee the rights he had acquired vest in his successor (*Henley's Bankrupt L.* 207-255. *Smith's Mercantile L.* 547-590. Statutes as quoted). [ACT OF BANKRUPTCY. BANKRUPTCY. PROOF. CERTIFICATE.]

IN SCOTLAND the duties which correspond with those of the assignee in England, devolve on the trustee. [SEQUESTRATION. TRUSTEE.]

IN IRELAND, by 6 & 7 Wm. IV. c. 14, the law as to assignees in bankruptcy, is framed on the model of that of England,—there are, however, no official assignees, and therefore the rules applicable to the country bankruptcies only apply. The various sections embracing the subject are as follows: By § 72 assignees are to be chosen at the first sitting appointed by the commissioners; and §§ 74-77 provide for the vesting of the bankrupt's estate in the assignees, without conveyance. By § 78 a certificate of the appointment of assignees must be entered in the office for enrolment of matters relating to bankruptcy. By § 79 the commissioners are entitled to dispose of estates tail, in conformity with the provisions of the Fine and Recovery Act (3 & 4 Wm. IV. c. 74). Section 86 provides for goods in the reputed ownership of the bankrupt passing to assignees, with the exception of registered securities on ships (for which 4 Geo. IV. c. 41, is referred to instead of 3 & 4 Wm. IV. c. 55), and §§ 89-91, 94, provide as to leases, inchoate agreements to purchase real property, powers, and stock, vested in the bankrupt, as detailed above with regard to England. Section 102 empowers assignees with consent of creditors (or if one-third in value do not attend the meeting, with consent of commissioner) to compound debts, and submit disputes to arbitration. By § 121 assignees are to keep a book of accounts of the bankrupt's estate, and commissioners are empowered to summon assignees, and enforce production of documents; and by § 120-123, the vesting of money according to direction of majority of value of the creditors, and purchase of Exchequer bills by direction of commissioner are enjoined. Section 124 provides for auditing assignees' accounts.

ASSIGNMENT, *Eng. & Ir.*; **ASSIGNATION**, *Scot.* is an agreement, by which a right or interest in one person is transferred to another. The granter is called cedent or assigner, the receiver assign or assignee. In England an assignment is employed in real property, generally for the purpose of transferring temporary or defeasible estates, such as estates for life or for years; and it differs from a lease in as far as it transfers the whole interest of the granter. In Scotland, in real property transactions, imperfect titles containing authority to the holder to complete them, are transferred to purchasers and others, by assignation, to enable them to make good their titles, and the portions to run of leases are common subjects of assignation.

In moveable property, when the assignment conveys property in the possession of the assigner, the contract comes properly under the head of "Sale." In its more limited acceptation, however, the term is generally used to express the conveyance of a *right* which the assigner has to the subject of the transaction. In this manner debts, contracts, and all those rights which in England are called *choses in action*, and by the civilians *jura ad rem*, are the proper subjects of assignment. Among the most ordinary assignments is the indorsation of bills of exchange, bills of lading, and such like. By an old rule of the common law of England, a *chose in action* could not be conveyed, because such conveyance led directly to "maintenance," or that offence which arises from the money of one person being employed in prosecuting the suit of another. This rule still holds good in the common law courts, with some exceptions, among which are assignments of bills by indorsation. To enable assignments of bonds to be supported in those courts, a power of attorney authorizing the assignee to sue in name of the assigner is employed, and the courts so far aid the transaction, that if the obligee in such a document has paid the contents to the original obligor after notice of the assignment, he cannot plead the payment in a suit at the instance of the assignee. Courts of equity have always given full force to assignments (*Blackstone's Com.* ii. 442).

IN SCOTLAND, intimation of an assignation to the obligee is necessary, not only to give a preference to the assignee over one acquiring a posterior title, and to prevent the obligee from fulfilling his contract with the original obligor, but for the completion of the transference. The regular form of notice is made by the assignee or his procurator appearing before the obligee, or repairing to his dwelling house in presence of a notary and two witnesses, and reading the assignation or leaving a schedule of it. If the obligee is not in Scotland, the intimation must be made at the Register House. The narrative of the giving notice is reduced to a probative instrument by the notary. Professor Bell observes, that "an assignation [in England] of a debt due in Scotland, produced in a competition with creditors arresting the fund, will be ineffectual without intimation or something equivalent." A formal notice, attested by a notary public, is not always necessary,—equivalents are admitted. Thus an action, or any kind of legal execution, raised by the assignee against the debtor, is effectual notice. A bill accepted, or even protested for non-acceptance, is held sufficient notice of an assignation of a money-debt; and an acknowledgment of notice in the debtor's handwriting on the assignation, or in a paper apart, is sufficient. A partial payment will prove notice in so far as respects the debtor. Some transferences of property, which take place in the course of the administration of justice, or by the fixed rules of the law, are called assignations, as adjudications of real property, marriage in the case of the property of a female, &c. These do not require notice, but the debtor will be justified in paying to the original creditor until he is acquainted with the event. A mere document of debt may be transferred by indorsation; but a special assignation is necessary to convey the diligence that may have followed on it. Diligence (or execution) taken out in the name of the cedent, cannot be used in that of the assignee without judicial warrant (*Erskine's Inst.* b. iii. tit. 5. *Bell's Com.* ii. 16-20).

ASSIZE, an ordinance or decree regulating the price of bread, ale, fuel, or other common necessary of life. Bread was formerly rated according to the price of wheat. Assizes were in ancient times very common; and the power to set one on some articles still subsists, though it is seldom or never acted upon. The inutility of such regulations is now too obvious to require comment.

ASSURANCE. [INSURANCE ON LIVES.]

ATTACHMENT, in its general sense, is a writ issued by a court of justice on bare suggestion, or on the judges' own knowledge, against a party who has committed a contempt. *Foreign* attachment, by the custom of the city of London, is a process by which property in the hands of some party, other than the debtor, may be attached for payment of the debt. It may proceed from the court of the Mayor or of the Sheriff, but the former is the more advantageous. A debt may be attached in the hands of the garnishee (literally the person warned, viz. he who has the property of the debtor in his hands) before it is due, but cannot be levied till the term of payment. The original debtor must be summoned and have notice. Attachment cannot proceed on goods in the hands of a carrier (*Comyns' Digest*, v. *Attachment*).

ATTORNEY, POWER OF. [LETTER OF ATTORNEY.]

AUCTION, SALE BY, is the public sale of property, to whatever person present will give the highest price for it. By the usual form in this country, the property is set up at a minimum, and intending purchasers bid above each other, until no one will bid more. By the form commonly called Dutch auction, a price higher than that expected is named at the commencement, and gradually reduced until some one consents to purchase.

In England, sales by auction come within the statute of frauds, 29 Ch. II. c. 3, and therefore, when the price of any article is £10 or upwards, the contract is not good unless the buyer take delivery of a part, or receive earnest, or a memorandum in writing be signed by the parties or their agents. In auctions, the auctioneer is from the commencement agent for the vendor, and, by bidding, the proposing purchaser is held also to constitute him his agent. It will be sufficient conformity with the statute of frauds, that the auctioneer write the initials of the purchaser's name opposite to the lot in the catalogue, if the conditions of the sale be annexed to the catalogue, or clearly referred to. An auctioneer, while acting as such, cannot purchase the property he is employed to sell. He has a lien for charges and auction duty, first on the goods, and when they have been delivered, on the price. An auctioneer is liable for deterioration of the goods through his negligence, but not for unavoidable casualties. [BAILMENT.] It is his duty to sell to the highest bidder, but no action will lie against him for not obtaining the price he was instructed to obtain, though action will lie for not putting up at the price fixed by the vendor. The fall of the hammer decides the completion of the contract (unless some other criterion be adopted, such as the running of a sandglass, or the burning of a candle), and until that event occurs a bidder may retract. It is said that in England, where the sum bid is £10 or upwards, and so comes within the statute of frauds, he may resile before the writing is completed. On the part of the exposer the sale must be conducted without the adoption of undue means for raising the price, and so that the lots may fall to the highest real bidder among intending purchasers. Fictitious bidding, by means of persons termed "white bonnets," is unlawful, and vitiates the sale. The clause of the act 42 Geo. III. c. 93, referred to below, countenances buying in by the exposer or his agent, provided "the fairness and reality of the transaction" be "certified." If due notice is given of such intention, therefore, the owner may bid. If the sale be advertised, however, as "without reserve," it would appear that he cannot do so. Fraudulent description or concealment will vitiate the transaction; it is a common fraud to mix effects (such as pictures and other works of art) with collections which have acquired a reputation from the judgment of their possessor, and to sell the whole as having been his. Such a fraud will vitiate the transaction. On the other hand, bidders must not combine, or use other means to prevent the sums offered from rising to the extent they would reach were each person besides the final purchaser freely to bid the utmost he intends to give. Thus the contract was voided where a purchaser declared to the people around him that he had a claim on the property exposed (Fuller *v.* Abrahams, 1821; 3 *Brod. & Bing.* 116). In Scotland, three persons having been commissioned to bid for property at a sale, agreed that the one who had the highest commission should purchase at the upset price, and divide the difference among his associates; besides the reparation for fraud, the sale was found void (Murray *v.* Macwhan, 1st March 1783, *M.* 9567). Where there are printed conditions of sale, they cannot be altered by the verbal statement of the auctioneer. It is sufficient publication of the conditions, that they are posted on the auctioneer's box, or on the wall of the room, or are attached to catalogues circulated among the frequenters. (*Babington's Law of Auctions. Sugden's Law of Vendors*, 13-45. *Morton on Vendors and Purchasers*, 148-165.)

AUCTIONEERS.—Auctions must be conducted by a licensed auctioneer, with a few exceptions which provide generally for the sale of property seized in execution of debt. The cost of the license is £5, 10s., and it must be renewed annually on the 5th July. If an auctioneer sell any exciseable commodity, he must also have an excise license, unless the article be sold on the *entered* premises of the seller, and for his benefit, or be a foreign commodity sold in the warehouse in one entire cask or package to one person or firm. (6 Geo. IV. c. 81, §§ 8, 12.) He must also give security to deliver to the excise, within a certain period, a true account of every sale, and to pay the auction-duty thereon; for which purpose, twenty-eight days are allowed within the London district, and six weeks every where else. He is further bound, under penalties, to deliver in a detailed catalogue of the articles to be offered for sale, attested by himself or clerk: if the sale is to be held within the London district, two days' notice thereof must be given in writing at the head office; elsewhere, three day's notice must be given to the collector at the nearest excise-office. The auctioneer is liable for the amount of duty, but may recover the same from the vendor. It is commonly stipulated that the buyer shall pay the duty in addition to the sums bid by him. The number of licenses taken out in the year ending January 5, 1837, was, in England, 3004; in Scotland, 389; in Ireland, 262; total, 3655.

AUCTION-DUTIES.—Household furniture, pictures, books, horses, carriages, and the like kinds of personal property, pay 12½ pence per £ sterling, of the purchase-money: Freehold, copyhold, or leasehold estates, whether in land or buildings; shares in the joint-stock of corporate or chartered companies; reversionary interest in any of the public funds; plate or jewels; and ships or vessels pay 7½ pence per £ sterling: Sheep's wool, the growth of the United Kingdom, sold for the benefit of the growers or first purchasers, $2\frac{1}{10}$ pence per £ sterling. *Exemptions.*—These are very numerous; the principal are the following:—Piece goods wove or fabricated in this kingdom, which shall be sold entire in the piece or quantity, as taken from the loom, and in lots of the price of £20 and upwards, and so as the same be sold in no other than entered places, and openly exposed at such sale (29 Geo. III. c. 63, §§ 1, 2); all grain, flour, meal, beef, pork, hams, bacon, cheese and butter, imported into Great Britain, if sold on account of the importer within twelve months (41 Geo. III. c. 91, § 8); produce of the whale and seal fisheries; elephants' teeth, palm-oil, drugs, and other articles for the use of dyers, mahogany and other woods used by cabinet-makers, imported from Africa or any British settlement, and merchandise brought from any British colony in America, the same being the produce of such colony, if sold by the original importer within twelve months from the time of importation (32 Geo. III. c. 41; 42 Geo. III. c. 93, § 3); property sold by order of the Court of Chancery or Exchequer: sales by the East India, or Hudson's Bay Company: sales by order of the Commissioners of Customs, Excise, or other government boards: sales by the Sheriff for the benefit of creditors in execution of judgment, and bankrupts' effects sold by assignees or trustees; goods damaged by fire, or wrecked or stranded, which are sold for the benefit of insurers: wood, coppice, the produce of mines or quarries, cattle, corn, stock, or produce of land, while they continue on the lands producing the same (19 Geo. III. c. 56, §§ 13, 14). By 42 Geo. III. c. 93, § 1, an allowance is made of the unpaid duty in the case of goods offered to sale by auction, which have been bought in by the exposer or his agent, on notice in writing having been given to the auctioneer; the notice being "verified upon the oath of the auctioneer, and also the fairness and reality of the transaction, to the best of his knowledge and belief."

The net revenue derived from auction-duties in the year ended January 5, 1840, was in England £263,567; in Scotland, £21,014; in Ireland, £13,824; total, £298,405.

AUDIT, an examination of accounts by persons duly appointed.

AUNE, a French cloth measure; the aune *usuelle* = $47\frac{1}{4}$ Imp. inches; the old aune of Paris = $46\frac{3}{4}$ Imp. inches.

AUSTRALIA. [NEW SOUTH WALES. SOUTHERN AUSTRALIA. TASMANIA. WESTERN AUSTRALIA.]

AUSTRIA, an empire situated betwixt lat. 42° and 51° N., and long. 8° and 26° E.; and bounded N. by Saxony, Prussia, Poland, and Russia; W. by Bavaria, Switzerland, and Piedmont; S. by Tuscany, the Ecclesiastical States, the Adriatic, and Turkey; E. by Turkey and Russia. Area, 255,226 square miles. Population, according to the latest returns, Austria Proper, 2,113,915; Styria, 859,841; Tyrol, 786,543; Bohemia, 3,897,076; Moravia and Austrian Silesia, 2,066,218; Illyria, 1,145,445; Galicia or Austrian Poland, 4,548,534; Hungary, Sclavonia, and Croatia, 11,536,431; Transylvania, 2,034,385; Dalmatia, 309,412; Venetian Lombardy, 4,332,581; total, 33,630,381. Capital, Vienna, pop. 330,000. The government is monarchical; in Hungary, the nation shares the legislative, and even the executive power, with the emperor; and the Tyrolese possess to a certain extent the same privileges. In other parts there are provincial diets, but they are consulted only as to the mode of raising the taxes; so that his imperial majesty is in a great measure an unlimited sovereign.

The Austrian empire being generally mountainous, the plains, which occur chiefly in Hungary and Galicia, occupy a comparatively small part of the surface. In point of climate, the whole may be divided into three regions. The southern extends from lat. 42° to 46° N., where the depth of winter resembles the month of March in northern countries; and where are found the olive, myrtle, vine, fig-tree, and even pomegranate. In the middle region, from lat. 46° to 49° N., the olive is not found, but vines and maize thrive in favourable situations; winter lasts from 3 to 4 months; summer is warm, but variable; and the air is salubrious, except in the vicinity of the Hungarian marshes. The northern region extends from lat. 49° to 51° N., where the winter is severe, and lasts fully 5 months; vines and maize are no longer to be met with, and even wheat requires a choice of situation. The soil, though of endless variety, is in general fertile; but in agriculture, Austria has not kept pace with other European states. Great pains have, however, been lately taken to improve the land, and about 4-5ths of the entire area have been brought into use. The arable portion forms less than one half; the forests and woodlands more than a third; the vineyards about 1-50th; and the meadow and grazing ground, each about 1-11th of the available surface. The country abounds in minerals. The mines of gold and silver in Hungary and Transylvania, and of quicksilver at Idria in Carniola, are the richest in Europe; lead and copper are produced in considerable quantities; and the supply of iron is almost inexhaustible, though the quantity raised is limited by the dearness of fuel. Tin, calamine, zinc, cobalt, antimony, chrome, bismuth, manganese, also exist; and indeed nearly every metal except platinum, is to be found in different parts of the empire. Salt exists in abundance: the celebrated mine of Wieliczka, in Galicia, yields annually 35,000 tons; and the total yearly produce of the empire is nearly equal to the consumption, as its importation is prohibited. Vitriol, alum, soda, sulphur, and saltpetre, are likewise found in great quantities. Scarcely a province is deficient in coal; but the quantity raised is trifling, owing to the abundance of fuel obtained from the forests. Marble and a variety of precious stones also occur. The silk produced yearly is estimated at upwards of 7,000,000 lbs., a great part of which is exported from the Italian provinces, where it is chiefly raised. The produce of the vine, though far short of what it might be rendered, is a source of considerable wealth; and a large quantity is exported, chiefly to the adjoining states; the finest is the celebrated Tokay, made at Zemplin, in Hungary. Olive oil is produced in large quantities in the Italian provinces. Besides these articles, tobacco, hops, hemp, flax, and potash, are produced in sufficient quantity to afford a surplus for exportation.

The manufactures of Austria are considerable, though by no means proportionate to its natural resources. Those of linen and woollen in Moravia and Bohemia have long been celebrated, and the introduction of Jacquard's machinery has produced a rapid extension of the silk manufacture, especially in Lower Ens, at Vienna, and in the Italian provinces. The cotton manufacture employs a great many hands, but it is not in a prosperous condition, and is indeed entirely supported by the present high rate of duty on foreign articles. The other manufactures are chiefly those of iron, leather, paper, and glass; the last chiefly in Bohemia. The proportion of the manufacturing classes to the agricultural, is said to be as one to four.

The internal commerce, though burdened in some branches by government monopolies, and by the frontier duties of each separate state, is still very considerable. The communication betwixt distant places is facilitated by navigable rivers, and generally by good roads, on which the government bestow great attention. Of the rivers, the most important are the Adige, Po, Elbe, and above all the Danube, which, with its tributaries, pervades the whole empire, crossing, however, its eastern boundary at about 500 miles from the sea. An important aspect has been lately given to the navigation of the Danube by the introduction of steam-vessels. This was first accomplished in 1828, by two English shipbuilders, Andrews and Pritchard. A company has since been formed, with a charter for 25 years, to prosecute further this great object; and it is stated, that there are now 9 steam-boats on the river, forming a chain of communication betwixt Vienna and Constantinople. This navigation is throughout rather difficult, owing to shoals and rapids; and at Orsova, it is altogether impeded by rocks. A further disadvantage occurs from the fact, that the mouths of the river are now in the possession of Russia, who is said to view with jealousy the extension of this navigation. With the view of keeping the communication open, it has been proposed to cut a canal from the nearest point to Kustendji, on the Black Sea.

Vienna is the great storehouse of the internal trade of the empire; the other commercial towns are Prague, Pesth, Cronstadt, Lemberg, Brody, Botzen, Milan, Bergamo, Brescia, Semlin, and Debreczin. Austria has kept aloof from the Prussian commercial league; and its chief foreign intercourse by the land frontier is with Turkey, the lesser German States, and Switzerland.

The maritime commerce of Austria is comparatively inconsiderable, owing partly to its small extent of seacoast, but much more to the monopolies and restrictions of the government. The export of the precious metals, ashes, raw flax, and hemp with the roots attached, is prohibited. Many articles, such as salt, gunpowder, and tobacco, are monopolized by the government; and their importation is either forbidden, except to government contractors, or loaded with high duties. Duties of a prohibitory character are also imposed on most woven fabrics. The duty on cotton manufactures of all kinds (exclusive of twist) is 60 per cent. *ad valorem*; on woollens and fine hardware the same; on silks, £1 per lb.; on linens, from 5s. to 12s. per lb. The duties on coffee, refined sugar, and many other tropical productions, are likewise very high. In consequence of these regulations, a very large proportion of the trade is carried on by smuggling, a practice which is conducted with facility from the nature of the frontier, and by the corruption of the custom-house officials. According to recent statements, however, there are grounds for expecting that this prohibitory system will be soon either abolished or greatly relaxed.

In 1834, the registered merchant shipping of the empire consisted of 516 vessels of 123,890 tons; but this was exclusive of the smaller class of coasters. The chief ports are Venice, Malamocco, Brondolo, and Chioggia, in the Venetian territories; Trieste, Fiume, Rovigno, Capo-d'Istria, and Pola, in Illyria; and Ragusa, Cattaro, Zara, Sebenico, and Spalatro, in Dalmatia. The foreign trade is, however, almost wholly engrossed by Trieste and Venice, which are both free ports.

Trieste is situated in 45° 38′ N., and 13° 46′ E., at the N.E. extremity of the Adriatic, pop. 51,346. It possesses a commodious harbour, and being a free port, and almost the only outlet for the South of Germany, Illyria, and part of the Sclavonian provinces, its commerce is very extensive. Exports—glassware, hardware, beads, copper, wheat, rice, currants, raisins, hemp, iron, paper, rags, Russia leather, shumac, silk, steel, tobacco, timber, musical instruments, and other articles. Imports—principally sugar, cotton-wool, coffee, olive oil, cotton and woollen manufactures: the other articles, comparatively of small amount, are almonds, hides, wax, wool, valonia, gums, wheat, maize, barley, and hemp. Of these imports, a very considerable proportion is forwarded to other places, particularly to Venice. In 1836, no fewer than 1095 vessels engaged in foreign trade entered the port, and the total number of vessels entered, including coasters, was 8489, of 422,743 tons. The value of the trade with different places, in the same year, was as follows:—

Countries.	Imports.	Exports.	Countries.	Imports.	Exports.
Great Britain	£598,270	£558,970	Roman States	£124,500	£254,850
Russia	290,290	32,810	Sicily	630,220	101,670
Sweden and Norway	27,500	....	Ionian Islands	39,370	72,960
Denmark	400	3,440	Greece	147,770	137,320
Prussia	....	17,360	Turkey	990,150	680,856
Germany	15,100	56,370	Egypt	736,380	130,550
Holland	66,760	48,100	Barbary	5,410	15,410
France	236,500	69,850	United States	319,155	171,850
Portugal	86,920	19,550	Brazil	854,120	15,720
Spain	25,845	7,060	South America	205,110	14,430
Sardinia	40,210	40,440	Austrian Ports	838,260	2,033,479
Tuscany	37,150	53,200	Total	£6,315,390	£4,536,245

The commerce of Trieste is rapidly increasing, and between the years 1826 and 1838 it had nearly doubled in amount. This arose chiefly from a more extended intercourse with Turkey, South America (especially Brazil), Britain, and the United States. The exports to Britain were more than doubled in the four years 1833-36; but little difference has occurred in the imports. About 140 British vessels arrive annually.

Venice is a magnificent city and port, standing near the N. extremity of the Adriatic, on a number of small islands separated from each other by canals, and from the mainland by narrow shallows, pop. 103,000. Its commercial greatness dates from the middle ages; but since the discovery of the passage to India by the Cape of Good Hope, it has gradually diminished, and at present, although a free port, its trade is inconsiderable, compared with that of Trieste; being confined chiefly to the receiving and transmitting of goods through the medium of that city. *Exports*—silk, fruit, grain, woollens, paper, cheese, &c. *Imports*—chiefly olive oil, cotton, coffee, and sugar; with dried fish, wheat, linseed, indigo, iron, and other articles of smaller value. In 1836, the total value of the imports was £1,081,971; of which, £592,096, were brought *via* Trieste. About 30 British vessels arrive annually.

In 1835, the exports from *Fiume* amounted to £247,112, and from *Ragusa* to £45,936, consisting chiefly of goods sent coastwise.

MEASURES, WEIGHTS, MONEY, AND FINANCES.

VIENNA AND TRIESTE.

Measures and Weights.—The klafter of 6 Vienna feet = 6·23 imp. feet; the Vienna ell = 30·6 imp. inches; the post mile of 4000 klaftern = 4·71, or about 4¾ imp. miles.

The Vienna joch = 6889 imp. sq. yards, and 7·03 jochs = 10 imp. acres.

The Vienna wine eimer of 70 kopfen, 40 maasses, or 4 viertels = 12·46 imp. galls: the fuder = 32 eimers; the dreyling is 30 eimers.

The corn metzen of 4 viertels or 8 achtels = 1·69 imp. bushel; and 100 metzen = 21¼ imp. quarters: 30 metzen = 1 muth.

The Vienna pound of 4 quarters, 16 ounces, or 32 loths, = 8645 troy grains; and 100 lbs. = 1 centner = 123½ lbs. avoirdupois: 20 lbs. = 1 stone. Gold and silver are weighed by the Vienna mark = 4333 troy grains.

In *Trieste*, the woollen ell = 26·6 imp. inches; the silk ell = 25·22 imp. inches: the wine orna or eimer = 12·45 imp. galls; the barile = 144½ imp. galls; the oil orna = 107 Vienna lbs., or 14·17 imp. galls: 100 staji of corn = 28¾ imp. quarters; but estimated commonly at 342 staji to 100 imp. qrs. In other respects same as above.

Money.—Accounts are kept in florins of 60 kreusers, each of 4 pfennings: 20 florins are coined from the Cologne mark of fine silver; hence 1 florin = 2s. 0½d. nearly, and the par of exchange with London is 9 florins 50 kr. for £1. The other silver coins are the rixdollar of 2 florins (= 1⅓ German rixdollar of account), and pieces of 20, 10, 5, and 3 kreusers: The souverain d'or = 27s. 10d.; and the ducat about 9s. 5d.; there are also copper pieces of 1, ½, and ¼ kreusers. The paper-currency consists of notes of the National Bank, and of the outstanding depreciated notes of the old Vienna State Bank, called "*Wiener-Wahrung*" (Vienna value), which are at a fixed discount of 60 per cent.; 100 florins specie or effective being = 250 florins *W. W.* the last are used chiefly in retail, and for wages, &c.; all large payments being made in National Bank notes or in silver.

Bills upon Vienna are generally drawn in effective; and frequently the particular coin in which they are to be paid is specified—as in 20 kreuser pieces. Usance is 14 days after acceptance; bills payable "medio mense" are reckoned due on the 15th; 3 days of grace are allowed, except when drawn at less than 7 days' sight or date.

MILAN AND VENICE.

Measures and Weights.—Since 1803, a system founded upon that of France has been used throughout the Italian provinces in all public transactions; thus 1000 atomi, 100 diti, or 10 palmi = 1 metro or metre = 39·37 imp. inches; 1000 copi, 100 pinte, or 10 mine, = 1 soma or hectolitre, = 2·751 imp. bushels; 10,000 grani, 1000 denari, 100 grossi, or 10 oncie, = 1 libbra nuova Italiana or kilogramme = 2·204 lbs. avoird. The old measures and weights are still used in private business.

In *Milan*, the braccio = 23·4 inches; 1 wine brenta = 15·72 imp. galls.; 100 corn staji = 50·2 imp. bushels; the moggio = 4·02 do.; the mark = 3627 troy grains; 89·45 lbs. grosso, or 138·78 lbs. sottile, = 100 lbs. avoird.: the rubbio of oil weighs 47½ lbs. avoird.

In *Venice*, the woollen braccio = 26·6 inches; the silk braccio = 24·8 inches; 100 wine sechi = 237·6 imp. galls.; 100 oil miri = 335·4 imp. galls; 100 corn staji = 290 imp. bushels; the mark = 3681½ troy grains; 95·07 lbs. grosso, or 150·54 lbs. sottile = 100 lbs. avoird.

Money.—Accounts are kept in lire Austriachi of 100 centisimi, or 20 soldi; 3 lire Aus. = 1 Austrian florin; hence the lire Aus. = 8⅙d. sterling, nearly; and the par of exchange with London is 29½ lire Aus. for £1, or as sometimes quoted, 48¾d. per 6 lire Austriachi.

Formerly, accounts were kept in the lira Italiana, equal in value to the French franc. Retail transactions are conducted in lire corrente, or lire piccole. 100 lire Aus. = 87 lire It. = 113⅓ lire corr. = 169¾ lire picc.: hence the lira It. = 9½d.; the lira cor. = 7¼d.; the lira picc. = 4¾d. The circulating medium is composed chiefly of lire, and their halves, &c., and of Austrian currency. The gold doppia of Milan = 15s. 7½d.; the sequin = 9s. 5d.; and the scudo of 6 lire corrente = 3s. 7½d.

Bills are usually drawn in London upon Milan and Venice, at 90 days after date. No days of grace can be claimed at Milan; but the holder may allow 3 days. No days of grace are allowed at Venice.

The Austrian National Bank was instituted in 1817, with the view of restoring the money standard of the empire, which had become depreciated by the excessive issues of irredeemable paper by the Vienna bank during the war. It commenced with a capital of 100,000 shares, each of 1000 florins of that depreciated paper (the Vienna bank being then discontinued), and of 100 florins in specie. The former was converted into government bonds, bearing interest at 2½ per cent., payable in specie, and redeemable at 50 per cent.—the treasury at same time establishing a sinking fund for their redemption. The bank, though connected with the state, is under the management of a body of directors; and its accounts are published periodically. It advances money on bills and other securities, receives deposits, and issues notes for 5, 10, 25, 100, 500, and 1000 florins, which are payable in silver on demand. Branches have been established at Trieste, Milan, Prague, and other towns throughout the empire; and according to a late statement, the price of the shares had advanced to 1385.

The Public Revenue of Austria, estimated at £15,000,000, is derived chiefly from taxes, rates, crown-lands, and mines. The *expenditure* is nearly the same, more than one-third being required to maintain a standing army of 270,000 men. The accounts are, however, not made public. The *national debt* is about £60,000,000; principally in bonds called "*metallics*," from their dividends being payable in specie; the remainder consists of such obligations in depreciated paper W. W. as have not yet been bought up, or converted by the government. The prices of Austrian stocks as recently quoted were :—5 per cents. 105; 4 per cents. 100; 3 per cents. 75¼. The only debt owing by Austria in England is £2,500,000, raised by a loan contracted in 1823, with Mr Rothschild, at 82 per cent., in order to pay off a debt incurred to Great Britain during the war. The bonds are for £100 each, with coupons for the interest, at 5 per cent. payable in London half yearly, on 1st May and 1st November; they are transferable without registration, and are seldom offered for sale, being esteemed a safe and desirable investment.

ABSTRACT OF TREATY OF COMMERCE BETWEEN GREAT BRITAIN AND AUSTRIA, 3D JULY 1838.

1. The vessels of the two powers shall pay the same duties in their respective harbours, as the national vessels of each power. 2. All the productions of Austria, and which may be imported into the harbours of the Queen of England, as also all British productions which may be imported into the harbours of the Emperor, shall enjoy the same privileges; and *vice versâ*. 3. Articles, not the produce of the dominions of the two powers, imported from the harbours of Austria into British possessions, pay the same duties as if imported in British vessels. 4. All Austrian vessels proceeding from the harbours of the Danube, as far as Galatz inclusive, as well as their cargoes, may sail direct for the ports of all British possessions, as if they came direct from the harbours of Austria; and reciprocally, all English vessels, as well as their cargoes, shall be admitted into Austrian harbours with the same immunities as Austrian vessels. 5. The productions of the ports of Asia and Africa within the Straits of Gibraltar, which, after being carried direct to Austrian ports, are thence sent in Austrian vessels to British ports, shall enjoy the same advantages as if imported by English vessels from Austrian ports. 6. All articles imported or exported into, or from the ports of the two countries, under the flags of either, whether in British or Austrian bottoms, subjected to the same duties and premiums. 7. Goods in bond from either country subjected to the same duties on re-exportation. 8. No preference to be shown by either power in the purchase of imported commodities, on account of the nationality of the vessel in which such commodities may be imported. 9. The Austrian trade to the East Indies placed on the footing of the most favoured nations. 10. Treaty not to apply to trade between one port and another situated in the dominions of the same power. 11. The vessels and subjects of the two powers, in their trade and navigation, are always to enjoy reciprocally all the privileges of the most favoured nations in the ports of either. 12. Stipulations in treaty of 1815, as to trade between Austria and Ionian Islands, to continue in force. 13. This treaty to be binding until 31st December 1848, and thereafter, until 12 months after notice.

AVERAGE in the law of shipping is generally applied to the loss occasioned by any sacrifice made to insure the safety of a ship and cargo, and being a loss which underwriters have to replace, it constitutes part of the law of insurance. There are, technically speaking, two sorts of average, *general* average, and *simple* or *particular* average. The latter is an unmeaning term used merely in contradistinction to the other; to express those losses arising from the danger of the sea and otherwise, which are not made up by any contribution, but fall on the possessors of the article lost, or on those who may be responsible for its safety. General average dates back to the days of Rhodes. Its principles were fully developed by the earlier civilians; the maritime nations of the middle ages adopted them, and the system is in full practice over all the commercial world. The circumstance under which the provisions of this law can be had recourse to is, when a vessel and the crew, passengers, and cargo, are in such imminent danger as to render it necessary to make a sacrifice of a part, for the preservation of the whole. The simplest case is that of throwing goods overboard to lighten the ship. Here cargo is sacrificed, and the other proprietors of cargo, along with the shipowners, bear a share of the loss, according to their respective interests. In another instance, it may be necessary to cut away a mast, or slip an anchor. Here the sacrifice is against the shipowners, and the other parties interested must share the loss with them. It is of no moment how light and valuable may be the goods thrown overboard, or how much the reverse those saved. It is said that the act should be done with formality and deliberation, and with the consent of the majority of those on board. The circumstances, however, under which so extreme a measure is generally taken, do not often admit of form and deliberation, and the necessity for the act will have more weight than its regularity. Goods stowed on deck are presumed to be an encumbrance, and so not suitable subjects of average. A loss effected by inherent defect, or by sea risk, cannot be considered average; there must be an intention to sacrifice, and that intention must have been with the view of preserving the remaining property embarked in the adventure. It is held, that where a vessel having sustained an injury has to put into a port for repairs, the expense of putting into port and remaining there, is to be considered average loss, if the act was necessary for the safety of all concerned, but that the expense of the repairs (unless in so far as they may be solely necessary for the preservation of the cargo) falls on the shipowners. Property injured in the making of the sacrifice—such as a part of the ship cut away to facilitate the throwing overboard of goods, constitutes average. An accurate statement of the circumstances under which a jettison, or other loss on which average is claimed, should be entered in the log, and immediately on arrival, the master should draw up a narrative of the circumstances, and make affidavit to them, along with his crew, that there may be no ground to presume that goods have been removed since arrival.

The adjustment is generally made thus: The owners contribute according to the net value of ship and freight at the port of delivery, after deducting expenses. But ship provisions, wearing apparel, and seamen's wages, do not contribute. If the vessel has had to put back to the port of lading, the cargo is taken at invoice price; otherwise, the cargo is valued at the price it would bring at the port of destination, deducting freight and charges. Ship furniture is rated at the cost of renewal, with a deduction of one-third. The value of what is lost being thus estimated, is added to the value of what is saved, and the whole being divided according to the respective interests of the parties, the loss which each has to suffer is a sum bearing the same proportion to his share of the whole sum divided, which the loss sustained bears to the whole sum. (*Abbot on Shipping*, 342-363. *Marshall on Insurance*, 538-552. *Stevens on Average*. *Martin on the Practice of Stating Averages*.)

AVERAGE in arithmetic is the *mean* of two or more quantities, formed by adding them together, and dividing by the number of quantities. Thus, 4 is the average of 2 and 6; and 5 is the average of 2, 6, and 7. The averages most commonly required in trade are those of prices. Example: What is the average price per quarter of 300 quarters wheat, sold at 70s. per quarter; 260 quarters at 50s.; and 270 quarters at 60s.?

300 quarters at 70s. = £1050
260 ...... at 50s. = 650
270 ...... at 60s. = 810
830 830) 2510 (*Ans.* £3 : 0 : 5¾ per quarter.

Further illustrations will be found under the heads ALLIGATION and EQUATION OF PAYMENTS.

In calculations of this kind, it must be remembered, that the average of a set of averages is not the average of the whole, unless there are equal numbers of quantities in each set averaged.

AVOIRDUPOIS, the name of the British commercial weight. It is "probably derived from *avoirs* (averia), the ancient name for goods, or chattels, and *poids* weight." (*Report of Commissioners of Weights and Measures.*)

AXUNGE. [LARD.]

AZORES, OR WESTERN ISLANDS, are situated in the Atlantic, between lat. 37° and 40° N., and long. 25° and 32° W., about 795 miles W. from Portugal, to which they belong. They consist of three groups, viz. 1. St Michael and St Mary; 2. Terceira, Fayal, Pico, St George, and Graciosa; 3. Flores and Corvo, exclusive of several islets. Pop. 205,000. The seat of government is Angra, in the island of Terceira, pop. 16,000.

These islands are of volcanic origin, and are in general mountainous. The climate is mild and pure; and the soil highly fertile,—most of the islands abounding in vineyards, orange and lemon orchards, and pastures. The growth of wine is considerable: it is produced mostly in Pico, but is known as Fayal wine, from being shipped from the latter. From 8000 to 10,000 pipes are exported in favourable seasons to America and the West Indies. The remaining exports are chiefly from St Michaels, and consist of large quantities of fruit to Britain; and of corn and live-stock to Lisbon, Madeira, and the Canaries. The imports are, from England, cottons, woollens, hardware, earthenware, and other manufactured goods; from America, boards, staves, lumber, fish, pitch, tar; and from Portugal, tobacco, sugar, coffee, dispensations, indulgences, images of saints, and relics. The principal shipping towns are Ponta del Gado in St Michaels, Angra in Terceira, and Fayal in the island of that name; but there is no good port, and as none of the anchorages afford shelter, ships are often obliged, by violent winds, to put to sea at a very short notice, particularly in the months from October to April. In 1833, the British shipping that entered the Azores, and the invoice value of British imports and exports were as follows: *St Michaels*, ships entered, 305; tonnage, 21,903; imports, £56,437; exports, £100,116. *Terceira*, ships entered, 59; tonnage, 5419; imports, £18,900; exports, £12,667. *Fayal*, ships entered, 32; tonnage, 3607; imports, £8699; exports, £7294. *Total* value of British imports in 9 years, 1825 to 1833, £738,867; and of exports in same period, £895,785. *Measures, Weights, and Money*, same as Portugal. (*Geo. Journal*, vol. iv. *Tables of Board of Trade.*)

AZURE STONE, OR LAPIS-LAZULI, a mineral substance of an azure blue colour. It is found massive; also, though rarely, in rhombic dodecahedrons. Sp. gr. 2·95. The massive is nearly opaque, and its blue colour is not uniform. Chief localities, China, Persia, Bucharia, and Siberia. The finer kind is prized by the lapidary; and the common is used occasionally for toys, &c. Lapis-lazuli is, however, chiefly important from its affording *ultra-marine*, a beautiful pigment, highly valued by painters.

B.

BABLAH, called also *Neb-neb*, is the rind of the fruit of the *Mimosa cineraria.* It contains a considerable proportion of gallic acid; also tannin, a red colouring matter, and an azotized substance. Bablah has been imported from the East Indies and Senegal, as a substitute for the more expensive astringent dye-stuffs, and for communicating shades of drab to cotton.

BACON (Fr. *Lard.* Ger. *Speck*), the flesh of the hog salted and dried. [Hog.]

BADEN, a German grand-duchy, situated on the right bank of the Rhine in its upper course, between lat. 47° and 50° N.; and long. 7° and 10° E. Area, 5915 British square miles. Population in 1834, 1,231,319. Capital, Carlsruhe; pop. 20,500. Government a constitutional monarchy, with two chambers.

Baden has been called the "Eden of Germany," for although nearly one-half of its surface is occupied by the mountainous districts of the Black Forest and the Odenwald, it possesses a soil favourable to the growth of corn, wine, and fruit, and abounds in magnificent woods and navigable streams; while the proportion of waste lands to the whole soil is less than six acres in every thousand. Agriculture is the chief occupation of the people, and yields a surplus of grain for the markets of Switzerland and France. Tobacco, hemp of a very fine description, and flax, are also extensively cultivated. The average produce of the vine, which is chiefly grown on the high lands skirting the valleys of the Rhine and Maine, and Lake Constance, is estimated at about 4,000,000 gallons. Mining is carried on with partial success, the chief mineral productions being silver, cobalt, copper, iron, manganese, salt, coal, alum, vitriol, and sulphur. The manufactures, though inconsiderable, have increased since the accession of Baden to the Prussian Commercial Union; the most extensive is perhaps that of the middling and coarser descriptions of linen; the chief others are woollens, cottons, silks, watches, jewellery, paper, and wooden ware, clocks, and straw-hats, for the production of which the Black Forest has been long celebrated. Pforsheim, Carlsruhe, and Mannheim, are the principal manufacturing towns.

The exports consist of timber, grain, meal, oil, hides, wine, hemp, linen, tobacco, iron wares, and smaller commodities, to an amount exceeding one million sterling yearly; the imports of French and other wines, colonial produce, drugs and dyes, iron, steel, cottons, silks, fine woollens, horses, and cattle. Baden is advantageously situated for trade from its position on the Rhine, Maine, Neckar, and other streams, which, besides securing to it an outlet for its own productions to France, Germany, and Switzerland, have rendered it a country of extensive transit. Free ports have been instituted at Mannheim, Schröck on the Rhine near Carlsruhe, Ottenheim and Freistett on the same river, Ludwigshafen and Constance on the Lake of Constance, and Heidelberg on the Neckar.

Measures and Weights.—The new aune of 2 feet = 6 French decimetres or 23·62 inches; the morgen = 36 ares or 0·8896 acre; the ohm = 150 litres or 33·015 Imp. galls.; the last of 20 malters = 30 hectolitres, or 10·32 Imp. quarters; and the centner of 10 stones or 100 lbs. = 50 kilogrammes, or 110¼ lbs. avoirdupois.

Money.—Accounts are stated in florins, each divided into 60 kreutzers. The Baden or Rhenish florin, being coined at the rate of 24½ to the Cologne mark of fine silver, is equal 1s. 8d. sterling.

Finances.—The estimate of the budget for 1837-38 was 13,026,559 fl. a-year, of which the share received from the Prussian Customs Union was 1,495,593 fl. National debt about 12,000,000 fl.

BAGGAGE. [Passenger.]

BAGGING, a coarse hempen fabric used as a wrapper for cotton wool, coffee, and other articles. It is made chiefly at Dundee, for exportation to America.

BAILMENT, from the French *bailler*, to deliver,—a term peculiar to English law. Sir William Jones defines it as "a delivery of goods on a condition, expressed or implied, that they shall be restored by the bailee to the bailor, or according to his directions, as soon as the purpose for which they were bailed shall be answered" (*Essay I. on Bailments*). It embraces a variety of contracts, the nature of which is thus defined and illustrated by Blackstone: "a delivery of goods in trust, upon a contract, expressed or implied, that the trust shall be faithfully executed on the part of the bailee. As, if cloth be delivered, or (in our legal dialect) bailed, to a tailor to make a suit of clothes, he has it upon implied contract to render it again when made, and that in a workmanly manner. If money or goods be delivered to a common carrier, to convey from Oxford to London, he is under a contract in law to pay, or carry them, to the person appointed. If a horse, or other goods, be delivered to an innkeeper or his servants, he is bound to keep them safely, and restore them when his guest leaves the house. If a man takes in a horse, or other cattle, to graze and depasture in his grounds, which the law calls *agistment*, he takes them upon an implied contract to return them, on demand, to the owner" (*II.* 451). The contracts so embraced in this term will, where they have relation to commerce, be found treated under their respective designations. The term bailment is now generally used by legal writers, for the purpose of classifying the various contracts it embraces, with a view to a consideration of the proportionate responsibility of the bailee for the subject under his charge, according to the nature of the bailment. The scale of responsibility generally approved of, is that adopted by Sir William Jones. He adopts the distinction of the civilians between *culpa*, *culpa lata*, and *culpa levis*, or "ordinary neglect," "gross neglect," and "slight neglect." These are thus distinguished :—

"ORDINARY *neglect* is the *omission* of that *care*, which *every man of common prudence, and capable of governing a family*, takes of his own concerns.

"GROSS *neglect* is the *want* of that *care*, which *every man of common sense, how inattentive soever*, takes of his own property.

"SLIGHT *neglect* is the *omission* of that *diligence* which *very circumspect and thoughtful persons* use in securing *their own* goods and chattels" (118, 119). The responsibility of the bailee, as measured by these definitions, has been thus applied to the leading contracts comprehended under the term bailment.

In *Deposit*, where the bailee becomes the gratuitous custodier of the goods, he is not in general liable for what may happen to them, unless a wilful carelessness, which must be presumed to evince fraud or malice, can be shown to have actuated him. If he be naturally careless, and allow his own property to run the same risk, the proprietor must bear any loss which may occur, as the consequence of having trusted a person of such habits with his property,—in this case, then, the bailee is only answerable for gross neglect.

In *Mandate*, where the mandatory acts gratuitously, the same rule applies, with the difference applicable to the position of the bailee, who is not merely the passive custodier, but has undertaken to perform some act relative to the subject put into his hands. He is not bound to exact diligence, and cannot be made responsible, unless for gross carelessness, as above (but see below, in the case of a hiring).

Commodate or loan for use, exacts the highest degree of care on the part of the borrower. The rule is, that the article lent perishes to the owner, but as it is intrusted to the borrower for his convenience, he will be liable in damages, if the loss can in any way be attributed to the absence of caution on his part. A borrower or hirer is absolutely liable for the safety of the object, if he keep it beyond the time stipulated, or use it for a purpose different from that for which it was lent.

Pledge, or *Pawn*, being a contract for the mutual advantage of the bailor and bailee, exacts ordinary diligence. The subject, if it perish, perishes to the bailor, but he can make the bailee responsible if he has shown "ordinary neglect," or has not taken such care of it as a man usually takes of his own property. There are special statutory regulations for the responsibility of pawnbrokers. [PAWNBROKERS.]

Location includes many contracts of great practical importance, such as the letting and hiring of moveables, the employment of manufacturers or artists to perform operations on subjects put into their hands, the employment of factors and agents [FACTOR. PRINCIPAL AND AGENT.], and the delivery of goods to carriers, shipowners, innkeepers, and others. The general rule in location is, that the bailee is liable for ordinary neglect, but special rules apply to the several contracts. Thus, from an early period, shipowners, carriers, and innkeepers, have been considered under an absolute obligation safely to restore all goods committed to their charge, no cause of deterioration exculpating them, unless it be occasioned by "the act of God or of the king's enemies;" there are, however, in special cases statutory limitations of such responsibility. For further information on this subject, reference must be made to the heads CARRIER, FACTOR, INNKEEPER, SHIPPING, WHARFINGER.

In bailment, the bailor continues proprietor, but "a special qualified property" is transferred to the bailee, who being responsible to the bailor, has a right to maintain an action against any person injuring or abstracting the subject. (*Blackstone*, as above. *Sir William Jones' Essay on the Law of Bailments.*)

BAIZE, a coarse open woollen fabric, having a long nap, and sometimes friezed on one side. It is made at Chichester and Colchester, but principally at Rochdale.

BALACHONG, a kind of cake formed of dried fish, pounded up with salt and spices, and then allowed to ferment freely. The best sort, or the red balachong, is made of shrimps. The black, or common sort, is made of other small fish. It is esteemed a great delicacy by the Malays and Chinese, with whom it forms an article of extensive commerce.

BALANCE, the sum of money which must be added to one or the other side of an account, in order that the debits and credits may be *balanced*, or of equal amount. [BOOKKEEPING.]

BALANCE, OR BEAM AND SCALES, is a well-known instrument used for comparing weights with one another. When well-constructed, it must have the following properties :—1*st*, It should rest in a horizontal position when loaded with equal weights. 2*d*, It should have great *sensibility*, that is, the addition of a small weight in either scale should disturb the equilibrium. 3*d*, It should have great *stability*, that is, when disturbed, it should quickly return to a state of rest. That the first property may be obtained, the beam must have equal arms; and the centre of suspension must be higher than the centre of gravity. The second property, sensibility, is greater, in proportion to the length of the arm, the less the distance between these two centres, and the less the weight with which the balance is loaded. The third property, stability, is attained by making the centre of gravity of the whole apparatus fall below the point of support. The arm having a given length, additional weight either to the scale or beam is favourable to stability, and unfavourable to sensibility. Every increase of sensibility (the arm remaining the same) is a decrease of stability, and *vice versâ*. Stability in a balance is much less difficult to attain than sensibility. The scales of shopkeepers are sufficiently stable, but few are very sensible. Balances of great sensibility, however, are not suited for the ordinary purposes of business, as the process of weighing in such balances is generally tedious, owing to the slow vibrations of the beam. Balances used in commerce are sometimes constructed either fraudulently or by inaccurate workmanship, so as to make unequal weights produce equilibrium,—an effect produced by making the arms of the balance, though apparently equal, really unequal. But an error of this kind is readily detected, by transposition of the weights, when, if the equilibrium be not preserved, the balance is fraudulent and useless. A balance for delicate purposes should be made as much as possible of brass, as steel and iron are apt to acquire magnetic properties.

BALANCE OF TRADE, a term sometimes employed to express the difference between the commercial exports and imports of a state. This term was introduced, and has been chiefly used, by the supporters of the *mercantile theory*, a system of Political Economy which was based on the assumption, that "wealth consists of the precious metals; that what is gained in trade by one nation must be lost by another; and that our great object in receiving returns should be to get money instead of merchandise." Hence, when the exports exceeded the imports, the state was said to have a *favourable balance*, and in the opposite case, an *unfavourable balance*; it being supposed that such balances could not be cancelled, except by the remittance of an equivalent amount of gold and silver, and that the money thus remitted was the measure of the gain or loss derived by the state from foreign trade. In order chiefly to bring about the desirable result of a favourable balance, restrictions and prohibitions were for many years imposed on the importation of nearly all commodities except bullion, while on the other hand bounties were granted on exportation. [Bounty.]

The selfish principle that what is gained in trade by one nation is lost by another, is now abandoned; it being obvious, that unless in the general case both parties are benefited, no exchange of commodities will take place. It is now also admitted, that the wealth of states and of individuals consists not in money alone, but in the abundance of their whole disposable products; that gold and silver are commodities subject to the same general rules in their transmission, as sugar, tobacco, or any other commodities, namely, sent from where they are of lower, to where they are of higher value, and never exported except for the purpose of importing some more valuable article in return; that in the case of what is called an unfavourable balance, bullion is not exported unless it be at the time the cheapest exportable commodity; and that in point of fact its exportation (except from mining countries), as well as its importation, can take place only to a limited extent. If bullion be largely exported, it will become scarce, and of course dear, in the exporting country; the money value of other commodities will in a proportionate degree fall; and they will become preferable objects of remittance and exportation until bullion is again reimported. In a similar manner, if by the operation of a favourable balance, bullion is imported in greater quantity than is necessary to supply the wants of the country, its value will become depreciated in relation to other commodities, and it will be again re-exported. [Exchange.]

The public accounts do not show correctly the amount of the exports and imports of the country; the *official*, or custom-house rate of valuation, having been fixed so far back as 1696, when prices were altogether different from what they are now; while the *declared* value furnished by the merchant applies solely to the exports. In 1839, the official value of the exports was, £110,198,716; and of the imports, £62,004,000; showing, according to this valuation, a balance of trade in favour of the United Kingdom, or an excess of exports above imports, to the extent of £48,194,716! It is manifest, however, that unless the imports of a merchant exceed his exports in value, his trade would be speedily abandoned; and as what is true in the case of the individual merchant must be equally true in the case of the community at large, it follows, that could the public accounts be kept with accuracy, they would show, instead of a greater amount of exports than of imports, a very considerable excess of the latter above the former.

BALE, a bundle or parcel of goods, packed up for carriage.

BALKS, large beams of timber, such as are used in building.

BALLAST (Dan. *Baglast.* Du. Ger. & Sw. *Ballast.* Fr. *Lest.* It. *Savorra.* Sp. *Lastre.* Por. *Lastro.* Rus. *Balast*), sand, iron, or any other heavy material employed for sinking a vessel to a proper depth in the water, and to give it a just counterpoise against the action of the wind on the sails. In ballasting a vessel, the centre of gravity should be placed neither too high nor too low. When too much heavy ballast is deposited in the bottom of the hold, the vessel will be too *stiff;* she will roll violently, and besides having her sailing qualities impaired, will be in danger in bad weather of being dismasted. When, on the contrary, there is too little ballast, or this is so disposed as to raise the centre of gravity too high, the vessel will be too *crank*, and equal danger will arise. The art of ballasting, however, is to be acquired rather from experience than specific rules, as the quantity required by different vessels of the same tonnage varies according to their shape or *build.*

Vessels in ballast, *i. e.* having no goods on board other than the stores and other articles requisite for the ship, crew, and passengers, are exempt from the payment of certain port-charges which are levied upon vessels having cargoes; many formalities at the Custom-house are likewise dispensed with in favour of such vessels. A foreign vessel proceeding from a British port is considered as a ship in ballast, though having on board a small quantity of goods of British manufacture for the private use of the master and crew, and not as merchandise, provided such goods do not exceed in value £20 for the master, £10 for the mate, and £5 for each of the crew.

The ballasting of vessels in the Thames is placed under the superintendence of the Corporation of the Trinity-house, in whom is vested the soil of the river from London Bridge to the sea. Their charges are as follows:—

For *land ballast* from any quarries or pits east of Woolwich, 1d. per ton of 20 cwt. For *river ballast*, not washed, carried to any vessel employed in the coal-trade, 1s. per ton; carried to any other British vessel, 1s. 3d. per ton; carried to any foreign vessel, 1s. 7d. per ton. For washed ballast, double these rates are chargeable in each case respectively.

The following additional sums are also chargeable:—For each ton delivered in or unladen from the inward East or West India Dock, 10d.; in or from the outward East or West India Dock, the London Dock, the Commercial Dock, the East Country Dock, or the City, Surrey, or Regent's Canal, 4d.

No ballast is to be put on board before entry at the Ballast-office, under a penalty of £5 per ton. The Trinity Corporation may recover a fine of £10 from any person, for every ton of ballast which he may take out of the river, within the limits above mentioned, without their authority. It is likewise ordered, that the ballast of all vessels coming into the Thames must be unladen into a lighter, the charge for which is 6d. per ton; and a penalty of £20 is levied from the master of any vessel from which ballast is cast into the river.

Similar regulations exist in most other ports. [For the custom-house regulations as to vessels in ballast see CUSTOMS' *Regulation Act*, abridged, § 80-83.]

BALSAM (Fr. *Baume.* Ger. *Balsam*). Under this name are commonly included various medicinal resinous juices obtained from trees; but the term is strictly applicable only to such as contain benzoic acid, along with a volatile oil and resin; and of these true balsams there appear to be only five; namely, Balsam of Peru, Balsam of Tolu, Benzoin, Storax, and liquid Amber. There are besides the balsam of Gilead or Opobalsam, Copaiba, and others which contain no benzoic acid, but are turpentines containing a volatile oil and resin.

BALSAM OF PERU is procured from the *Myroxylon Peruiferum*, a tree which grows in the warmest parts of South America. It occurs in two states; one called the white, the other the black. The former, which results from spontaneous exudation, or incisions made in the bark, is very rare. The black or common balsam is said to be procured by boiling the bark and branches of the tree. It is a fluid, having the consistence of syrup, a brown colour, fragrant aromatic smell, and a pungent bitterish flavour. Sp. gr. 1·15. It is commonly imported in tin flasks. Both the white and the black balsams are extensively adulterated, chiefly with copaiba, turpentines, or volatile oils.

BALSAM OF TOLU, OR DRY WHITE BALSAM, is said to flow from incisions in the same tree (?); and when fresh, is of the consistence of a strong turpentine. It becomes tenacious with age, and in cold weather may be broken, but melts again in summer. It is a brownish-yellow or reddish-brown friable substance, of a pleasant smell like benzoin, and a weak aromatic somewhat acrid taste. Its adulteration with turpentine or resin is known by its odour when thrown on hot coals. It is imported in jars or tin cases.

The balsams of Peru and Tolu are employed medicinally in the state of syrup or tincture, particularly in cough mixtures; their fragrance also renders them pleasant adjuncts to chocolate, liqueurs, and other articles. [Benzoin. Storax. Copaiba.]

BAMBOO, a gigantic plant of the reed or grass kind, which grows luxuriantly in the tropical parts of Asia and America. It shoots up with great rapidity, and varies in height from 15 to nearly 100 feet. When full grown its general appearance is that of a straight rod with a number of stiff branches shooting at right angles from the main stem. It is of almost universal use, and is probably the most valuable boon conferred by nature upon the inhabitants of warm climates. The young shoots of the plant are eaten like asparagus; when older, a fluid affording an agreeable beverage is secreted in the hollow joints; and the leaves and seed are used in medicine.

"No plant is more useful where a union of strength and lightness is required. In building it is so generally employed that the houses of the inferior classes in India are almost exclusively constructed of it. It is adapted to the formation of bridges, masts for boats, and almost every article of domestic furniture. Bedding and sacking, and even cordage are manufactured from it. It is the common fence for gardens and fields; and palanquins and light carriages are principally composed of it. The hollow stems serve for waterpipes, and in military operations it has often been resorted to for the construction of screens. Finally, according to Barrow, the Chinese find the bamboo invaluable for keeping the whole empire in due subordination through the medium of incessant bastinading." (*Edin. Cab. Lib., British India.*)

BANANA, the fruit of the *Musa paradisiaca*, a valuable plant common in tropical countries. It very closely resembles the plantain [Plantain], but is generally shorter and rounder, with a pulp softer and of a more delicate taste.

The banana and plantain are to the inhabitants of the torrid zone what corn is to Europe, and rice to the natives of India and China. Humboldt doubts with reason whether there is any other plant in the globe which, in so small a space of ground, can produce so great a mass of nutriment. Eight or nine months after the sucker has been inserted in the earth, it begins to form its clusters, and the fruit may be gathered in less than a year. A plantation is perpetuated without any other care than that of cutting the stems on which the fruit has ripened, and giving the earth a slight dressing. A spot of 1076 feet may contain at least from thirty to forty plants, which, in a year, will yield more than 4410 lbs. of nutritive substance. Humboldt also estimates that the produce of the banana is to that of wheat as 133 : 1, and to that of potatoes as 44 : 1. Numerous preparations are made of this fruit, both before and after its maturity. When fully ripe, it is exposed to the sun, and preserved like our figs, forming an agreeable and wholesome food; while meal or flour is obtained from it by being cut into slices, dried, and pounded. It is calculated that the same extent of ground in Mexico on which the banana is raised, is capable of maintaining fifty individuals, whereas in Europe, under wheat, it would not furnish subsistence for two; and nothing strikes a traveller more than the diminutive appearance of the spots under culture round a hut which contains a numerous family (*Humboldt's Travels, Edin. Cab. Lib.*). The other parts of the plant are also useful. The leaves, which are more than two yards long, and a foot broad, are used for napkins and table-cloths, and are food for hogs. The water from the soft trunk is used as an astringent. In the Philippine Islands the fibrous bark of a wild banana, *Musa textilis*, is made into cloth, and also affords material for the cordage called in eastern countries Manilla ropes.

BANCO, an Italian word signifying Bank, used for describing the bank money of Hamburg and other places.

BANDANA, a kind of handkerchief with bright figures or spots upon a red or dark ground. India is the original seat of this manufacture; but the oriental patterns are now far surpassed in beauty and precision of design by the British. The term bandana is also applied to the style of calico-printing by which the patterns are produced.

BANK, a term sometimes applied to a depository for money, but most commonly to an establishment for dealing in money capital. The proprietor or manager of such an establishment is called a *banker*; and the term *banking* is generally used to express the rules and principles by which his operations are, or should be regulated, as well as these operations themselves.

I. Historical Notice.—Few records are preserved of the extent to which banking was known or practised by the ancients. The first bankers were the money dealers, who exchanged the coins of one nation for those of another. In Athens and Rome bankers are said to have existed who fulfilled many of the modern functions of the trade; but the prejudice against the taking of interest for money, rendered the business one of little repute. The barbarism of the middle ages left no field open for banking. In the twelfth century, however, the revival of commerce in Italy again created the necessity for the employment of bankers. These at first were Lombard Jews, who exchanged money and bills in the public market-places on benches, whence the term bank, from *banco*, the Italian word for bench. The modern public banks were originally deposit-banks. The first was the celebrated Bank of Venice, instituted in 1171. Its capital was composed of a loan advanced to the state, which was made transferable in the books of the bank. It opened accounts with depositors of gold, silver, and jewellery, giving them credit for the value of the effects deposited. The holders of such credits were said to be the holders of so much bank money; and it was made obligatory upon the merchants to make their contracts and draw their bills in this money, the payments being effected by a transfer from one name to another in the bank accounts of the funds deposited in its coffers. In 1587, its capital was above five millions of ducats. This bank continued to prosper until the subversion of the republic in 1797; and its money at all times bore an agio over the current money of the city: in 1808 it was discontinued. The banks of Barcelona and Genoa were founded in the fourteenth century. In 1609, the well-known Bank of Amsterdam was established, and shortly afterwards, in 1619, the Bank of Hamburg, both banks of deposit, on the model of that of Venice. The other continental banks are of much more recent formation.

In England, the Jews, famous during the middle ages for "their egregious cunning in trade," were the principal money dealers until the thirteenth century, when this branch of business was shared by a number of Lombard Italians who then settled in the country. The business of banking, however, in the modern sense of the term, is comparatively of recent date. In London, the merchants lodged their money for security in the Tower, whence they drew it out as occasion required; but in 1640, Charles I. having seized £200,000 thus deposited, they appear to have afterwards employed the goldsmiths as their depositaries. The London goldsmiths, whose money trade had previously been confined to the changing of coins, then extended their business by borrowing and lending on interest; and the receipts which they gave for deposits circulated nearly in the same manner as the modern bank notes. The extension of commerce which occurred about half a century later, after the settlement of the government of the Revolution, led to the institution of the Bank of England, the Bank of Scotland, and in time to other establishments in the manner afterwards described.

II. OBJECTS AND PRINCIPLES OF BANKING.—These will be best explained by first considering separately the principal purposes of a bank, namely, receiving deposits, facilitating remittances, issuing paper money, and making loans, and afterwards showing the general effect of these operations when combined; in each case having regard chiefly to the mode in which banking is usually conducted in the United Kingdom.

Deposits.—The banks first instituted in Europe after the revival of commerce were, as already noticed, established for the purpose of receiving deposits. The lodgements consisted of coin of full weight, or an equivalent amount of bullion; and the credits raised in the bank books for such deposits were transferred in payment of debts from one account to another by means of drafts or cheques; the coin or bullion being seldom or never withdrawn, except when required for exportation. No interest was allowed on the deposits; and the advantages derived from such banks consisted in the safe custody of the precious metals, in the facility and despatch given to cash transactions by the transfer system, and in the certainty afforded that these transactions would be adjusted in currency of a determinate and invariable standard, instead of the light and debased coins then in circulation. This mode of banking is still continued in HAMBURG, under which head it is more fully explained. But in the United Kingdom the receiving of deposits is invariably conjoined with other departments of banking business; and the general condition of the circulating medium renders bullion lodgements unnecessary. Deposit banking, as thus modified, still furnishes to the public the advantages of secure custody for their money, with the facility, despatch, and economy of the transfer system; besides which, interest, varying from about two to three per cent., is (except by the private bankers of London) generally allowed on the sums in their hands, from the readiness with which they can be reinvested by the banks in securities yielding a higher rate. Deposits in this country are, however, of two kinds: *Dead Accounts* (distinguished in Scotland as *Deposit Receipts*), in which money is invested for the purposes of security and interest without being operated upon; and *Drawing Accounts*, called also *Running, Operating*, or *Current Accounts*, in which there is a perpetual paying in and drawing out by cheques or otherwise, according to the circumstances or necessities of the depositor, interest being allowed on the daily balances in the hands of the bank.

Remittances were, in ancient times, effected by sending a messenger with the coin, and in the middle ages by means of bills of exchange. The latter still form the chief vehicle for foreign remittances; but the transmission of money from one part of the kingdom to another is now almost entirely effected by the banks, by whom it is conducted with great security and despatch, through the medium of their agents or their branches. These facilities encourage trade in two ways:—First, by causing money to be transmitted in a shorter space of time, capital is made to revolve more rapidly; and, secondly, they diminish the prices of commodities, operating like improved roads in lowering the expense of their conveyance. The most common form of effecting an inland remittance is that of a *Letter of Credit*, which authorizes the bank's correspondent to repay the money deposited with them to the party named in the letter; the use of the money during the intervening period and sometimes a small commission, forming the remuneration to the bank. [EXCHANGE.]

Circulation.—The issue of paper money in the form of notes payable to the bearer on demand, is, in reference to the public, perhaps the most important of the functions of a bank; but a disturbing element is attached to it from the circumstance of its being profitable according to the proportion in which the amount of notes that is kept in circulation exceeds the amount of capital which is kept in reserve for the payment of them. It is, however, generally admitted, that banks of issue are capable of conferring valuable benefits upon a country when they are properly conducted, their operations confined to the legitimate objects of banking, and their liability to comply with their contracts strictly enforced. The principal check upon the overissues of banks is the convertibility of their notes into specie on demand. That tendency is also limited on the one hand by the wants of the public, on the other by the desire of the banks to protect their own interest; as the issue of notes will be either in the repayment of deposits, or in the form of loans by discounts or otherwise. Farther checks exist in the system of bank exchanges, by which the notes circulated by one establishment are intercepted by the others and brought back to it; and by the practice of allowing interest on deposits, under the influence of which the notes not necessary in trade are returned for the purpose of investment. [MONEY.]

Loans may be classed under three heads: 1*st*, Discounts; 2*d*, Cash-credits; 3*d*, Overdrafts on Current Accounts:—

1. Discounts. The form in which loans are chiefly made by bankers is on the security of bills of exchange, which are well adapted for their purposes, as having only a short time to run before they fall due, the advanced capital soon returns, while, being transferable, they can, if necessary, be rediscounted. The advance is made to the full amount of the bill under deduction of interest, or as it is somewhat loosely termed *discount*, for the time which the bill has to run; a commission is also sometimes charged, varying from one-fourth to one-eighth per cent.

"The bills presented to a bank for discount," says Mr Gilbart, "may generally be divided into the following classes:—

"(1.) Bills drawn by producers or manufacturers upon wholesale dealers.
"(2.) Bills drawn by wholesale dealers upon retail dealers.
"(3.) Bills drawn by retail dealers upon consumers.
"(4.) Bills not arising out of trade, but yet drawn against value, as rents, &c.
"(5.) Kites or accommodation bills.

"The first two classes of bills are the best, and are fair legitimate bills for bankers to discount. The third class ought not to be too much encouraged. They are for comparatively small amounts, and are drawn by shopkeepers and tradesmen upon their customers. To discount these bills freely would encourage extravagance in the acceptors; and ultimately prove injurious to the drawers. When a man accepts bills to his butcher, baker, tailor, or upholsterer, he may fairly be suspected of living beyond his income. Solvent and regular people pay their tradesmen's accounts with ready money. The fourth class of bills, though sometimes proper, ought not to be too much encouraged. Persons out of trade have no business with bills. The last class of bills should almost always be rejected. To an experienced banker, who knows the parties, the discovery of accommodation bills is by no means difficult. They are usually drawn for even amounts, for the largest sum that the stamp will bear, and for the longest term that the bank will discount, and are presented for discount soon after they are drawn. The parties are often relations, friends, or parties who, from their avocations, can have no dealings with each other." (*History and Principles of Banking*, p. 155.)

The length of the period which bills have to run is also matter of consideration. The principal advantages to a bank of short dated bills compared with long dated bills are the following:—There is more safety in discounting short bills, because the parties may fail before the long ones fall due: The commission (where this is charged) will be more in the course of a year upon any given amount of capital employed in discounting short bills than in discounting long bills: A greater amount of notes will be issued in discounting a succession of short bills than in discounting long bills: Long dated bills lock up the funds of a bank, so that they cannot be discounted with safety but from the bank's own capital; for if a bank employs its deposits, or its circulation in discounting long dated bills and payment of the notes or deposits should be demanded, the long dated bills could not be rediscounted, and the bank must stop: Long bills may encourage speculation; as persons may purchase large quantities of commodities in the expectation that the price will advance before the long bills which he accepts in payment shall fall due; while if the bills are of short date this will be prevented. (*Ibid.* p. 156.)

Besides discounting bills the banks render important services in attending to their due negotiation; it being customary for merchants and other people to send all the bills and drafts payable to them to their bankers, who become responsible for their regular presentation for payment, and for their noting if not paid.

2. A Cash-credit is an undertaking on the part of a bank to advance to an individual such sums of money as he may from time to time require, not exceeding in the whole a certain definite amount, for repayment of which he enters into a bond with securities. Cash-credits are granted not only upon personal security, but also upon the security of stock in the Public Funds, also occasionally of lands or houses, and by some joint-stock banks on the security of their own shares. To those requiring temporary advances of money, cash-credits possess the following advantages over discounts:—The party can repay any part of the sum drawn at pleasure, and interest is charged only for the money actually employed: He has also the power of drawing whenever he pleases to the full amount of his credit; whereas, in the case of discounting bills, he must make a new application to the bank for each bill. To a bank the comparative advantages of a cash-credit in respect to bills, consist chiefly in its connecting the party more intimately with the bank; in the summary mode in which the bond may be recovered from the party or his securities; while to a bank issuing notes, the frequent operations under the credit gives activity to its circulation. On the other hand, their comparative disadvantages to a bank are as follows:

"(1.) Cash-credits, when once granted, cannot be called up, but bills of exchange soon fall due, and you can refuse to discount again. (2.) If you discount bills of exchange, they can be rediscounted to supply the bank with funds if necessary, but advances on cash-credits cannot be replaced. (3.) In case of a panic or a run upon the bank, the persons having cash-credits might have occasion to draw upon the bank, and the notes would immediately be returned upon the bank, for payment in gold; but you could refuse to discount bills of exchange until the run was over." (*Gilbart*, p. 177.)

The cash-credit system was first introduced in Scotland, to which part of the United Kingdom it is still chiefly confined.

3. Overdrafts on Current or Deposit Accounts. These are stated under a separate head, because in England the advances in this way are considerable. They are similar in character to the drafts under a cash-credit, with this difference, that in a current account the party overdraws on his own individual security, and that on each occasion he has to obtain the permission of the bank.

In advancing money, whether by discounting bills of exchange or otherwise, a bank receives only the market rate of interest. But as this is a return which may be obtained for money without incurring the expense of an establishment for the purpose, it is obvious that no one would invest capital in the business of banking were it to be confined to the loan department alone. The main object of the banker, however, is to procure, and employ on an advantageous footing, the money of other people, and his profits are nearly in proportion to the extent to which he can accomplish that object. The trading capital of a bank consists of—1*st*, The capital contributed by the partners; 2*d*, The money lodged on deposit; and, 3*d*, The money deposited for the purpose of remittance; to which falls to be added in the case of banks of issue, 4*th*, The amount of notes in circulation. These means are employed in—1*st*, Discounting bills of exchange; 2*d*, Advances on cash-credits, or overdrawn accounts; and, 3*d*, Investments in the funds and other public securities. The surplus of the former above the latter forms the *reserve* kept by the bank to meet current demands. The amount of reserve necessary in ordinary circumstances is to be estimated from experience, and the transactions and position of the bank; but as unforeseen events may occur which may render the bank liable to be called upon for the whole or a considerable proportion of its liabilities, whether in the shape of deposits or notes in circulation, it is of consequence that the amount of trading capital arising from these sources should be invested in securities which shall rapidly revolve, and be at all times convertible. The securities which best fulfil these requisites are bills of exchange, stock in the public funds, and exchequer bills, on which a bank can easily extend or diminish its advances in proportion to the capital which it may have to employ; increasing them when the deposits and circulation are increasing, and diminishing them when these are diminishing; while in anticipation of a run, the bills may be converted into money by being rediscounted, and the stock and exchequer bills sold. Investments on securities not readily convertible cannot be made with safety except out of the capital belonging to the bank itself.

Banking establishments are constituted in various ways. On the continent, the public banks are, in general, more or less connected with the government. In the United States they are chiefly joint-stock companies, with charters limiting the responsibility of the partners to the amount of their shares, or some fixed multiple thereof. In this country the banks are constituted in three ways:—*1st,* Chartered ones invested with certain privileges of monopoly,—as the Bank of England, and the Bank of Ireland; *2d,* Joint-stock banks established on the principle of unlimited responsibility; and *3d,* Private banks. The joint-stock and private banks again differ in some respects in their privileges and methods of transacting business, according as they are situated in London, in the provincial parts of England, in Scotland, or in Ireland.

III. THE BANK OF ENGLAND was established in 1694 as a bank of issue, deposit, and loan, under the title of the *Governor and Company of the Bank of England.* Its original capital of £1,200,000 was lent to government at 8 per cent. interest, with a further allowance of £4000 a-year for management. According to the statement of the projector, William Paterson, "the erection of this famous bank not only relieved the ministerial managers from their *frequent processions into the city* for borrowing money on the best and nearest public securities at an interest of 10 and 12 per cent. per annum, but likewise gave life and currency to double or triple the value of its capital in other branches of public credit." The charter was granted for a limited time; but it was renewed at different periods, some advantage being given after each interval by the bank to the public in the shape of an advance of money at a low rate of interest, or without any interest. The capital was increased by new subscriptions in 1708 to £5,559,995; in 1722 to £8,959,995; in 1742 to £9,800,000; in 1746 to £10,780,000; and in 1782 to £11,642,400; lastly, by a bonus of 25 per cent. in 1816 to £14,553,000; the whole of which, as it was raised, was lent to the government.

In 1708 an act was passed prohibiting all other banks of issue in England consisting of more than six partners; and this statute having been construed so as to apply to banks of all descriptions, the Bank of England remained the only joint-stock one in England until it was partially repealed in the year 1826.

In 1696 the bank became involved in difficulties, and was obliged to suspend payment of its notes; but was shortly afterwards relieved by the assistance of the government. No similar embarrassment occurred until the early part of the late war with France, when commercial difficulties, caused by the transition from peace to a state of hostility, an unfavourable state of the exchanges arising from a deficient harvest, foreign subsidies, and, above all, a general dread of invasion produced so great a drain for specie, that on Saturday the 25th February 1797, only £1,270,000 of treasure remained in the coffers of the bank. A further drain being apprehended, an order in council was issued next day by the ministers, prohibiting the directors from paying their notes in specie until the sense of Parliament could be taken. Shortly afterwards, the memorable *Bank Restriction Act* was passed, exempting the bank from paying in cash, and authorizing it to issue notes for £1 and £2 in lieu of gold.

This measure placed the currency of the country under circumstances wholly dissimilar to those that have attended it either before or since. The events of the war, particularly during the seven years that preceded the peace of Paris, opposed greater obstacles to the prosecution of our foreign trade than were ever at any other time put into action, whence gold and silver became the only articles which could be safely taken in exchange for the goods of which we were purchasers from the continent. These metals, especially gold, were besides greatly in demand for the pay of troops. These circumstances, acting in conjunction with the tendency of the Bank Restriction Act, under which the directors were relieved from the dangers that would otherwise have attended an undue expansion of their issues, caused such an enhancement of the prices of the precious metals, when measured by the paper-currency, as forced all our gold coin out of circulation. The difference in value of Bank of England notes and gold, estimated at the Mint price, was for some time trifling, and from 1803 to 1808 was no more than £2:13:2 per cent. But in the seven following years, that excess in value of gold was raised in the following degrees:—1809, £14:7:7 per cent.; 1810, £8:7:8 per cent.; 1811, £20:2:7 per cent.; 1812, £25:16:8 per cent.; 1813, £29:4:1 per cent.; 1814, £14:7:7 per cent.; 1815, £13:9:6 per cent. The fall in the price of gold which occurred in 1814 was brought about by the return to peace, which restored trade to its natural channels; and it was afterwards reduced to its Mint price by the contraction of issues forced upon the bank by Parliament.

The Bank Restriction Act had provided for the return to specie payments within six months after the signature of a treaty of peace; but, at the peace of Amiens in 1802, this was postponed for a year, on account of the serious inconvenience it would then have caused to trade; and after the rupture in 1803, the public called loudly for a continuance of the exemption. At the close of the war in 1815 an act was passed, declaring in the preamble that "it was highly desirable that the Bank of England should return as soon as possible to the payment of its notes in cash." The year following, however (1816), being one of commercial distress, the resumption of cash payments was postponed to July 1, 1818; and by a further act to July 1, 1819. In the last mentioned year a committee of the House of Commons was appointed to inquire into the subject generally, of which committee Mr (now Sir Robert) Peel was chairman; and upon the recommendation of their Report the celebrated act (59 Geo. III. c. 49), sometimes called *Peel's Act*, was passed, requiring the Bank after February 1, 1820, to exchange their paper for bullion at certain fixed and graduated prices, and on May 1, 1823, to pay in current gold coin at the Mint rate of £3 : 17 : 10½ per ounce: the latter provision was anticipated in point of time by the bank recommencing payment of their notes in coin on May 1, 1821.

Renewed Charter, August 29, 1833 (3 & 4 Wm. IV. c. 98). The following is a summary of the provisions of this act:—

Section 1. The Bank of England declared to have the exclusive privilege of banking upon the conditions specified in the act.

Section 2. During such privilege, no Company of more than six persons to issue notes payable on demand within London, or sixty-five miles thereof,—but banks beyond that limit may issue bills and notes payable on demand, or otherwise, at the place at which the same shall be issued, and also in London; but no such bill or note shall be under £5, or be reissued in London, or within sixty-five miles.

Section 3. Any Company of more than six may carry on banking in London, or within sixty-five miles, provided it do not issue its bills or notes payable on demand, or at any less time than six months.

Section 4. All notes of the Bank of England payable on demand which shall be issued out of London shall be payable at the place where issued.

Section 5. The exclusive privileges of the bank may be terminated upon a year's notice given within six months after August 1, 1845, and repayment of the public debt.

Section 6. Bank of England notes are a legal tender (except with respect to the bank itself) so long as the bank shall pay such notes in coin.

Section 7. Bills not having more than three months to run not subject to the usury laws. [This period has since, by temporary acts, been extended to twelve months.]

Section 8. Accounts of bullion, and of notes in circulation, to be sent weekly to the Chancellor of the Exchequer; and an average state of the bank accounts of the preceding three months shall be published every month in the London Gazette.

Section 9. Public to repay the bank one-fourth part of the debt of £14,686,800.

Section 10. If the proprietors shall so determine, the capital stock of the bank shall be reduced from £14,553,000 to £10,914,750; and the difference shall be divided amongst them on October 5, 1834.

Sections 11. 12. Provide for the qualification of directors in the event of the said reduction of stock being made.

Section 13. Bank to deduct £120,000 per annum from sum allowed for management of national debt.

Section 14. Provisions of 39 & 40 Geo. III. to remain in force, except as altered by this act, subject to redemption upon the terms following:—that at any time, upon twelve months' notice, to be given after August 1, 1855, and upon repayment of the public debt, then the said exclusive privileges of banking shall cease and determine.

Capital and Nature of Business.—The repayment of one-fourth of the debt due by the public to the bank was made by an assignment of 3 per cent. stock from the Commissioners for the reduction of the National Debt; but the proprietors have allowed this sum to remain as available capital in the hands of the directors. Hence the stock of the bank, sometimes called its *permanent capital*, still amounts to £14,553,000, upon which sum the dividend is paid to the proprietors. The real capital of the bank however exceeds this sum by £2,944,000, the amount of the undivided profits, or rest, at 31st March 1840; making its total amount £17,497,000. The permanent capital is transferable like government stock; and its value fluctuates from political causes, as well as from the value of money, and the supposed success of the Company. It is exempted from taxes, accounted personal estate, assignable by unstamped transfer, and not subject to forfeiture, or liable to be taken in execution. The disposable capital under the management of the directors consists of the amount raised by the issue of notes, that held by deposit from government and private parties, and, lastly, undivided profits. The sum of the whole is generally about £30,000,000, of which part is vested in coin and bullion, but a larger part in securities producing interest—such as Exchequer bills and mercantile acceptances. The income of the bank is derived from interest on government securities, discount on mercantile bills, allowance for managing the public debt, profits on bullion, and agency, amounting altogether to about £1,600,000, which, after deduction of salaries, losses, and duty on notes, forms the fund divisible among the proprietors. The bank is prohibited from engaging in any commercial undertaking other than its legitimate operations, such as the buying and selling of coin or bullion, and bills of exchange. Being, however, authorized, like the Banks of Amsterdam and Hamburg, to make advances on the security of merchandise lodged with it, or pledged to it by written documents, a power is given to the directors to sell the same for their reimbursement.

Management and Internal Regulations.—The chief management is vested in a Governor, Deputy-Governor, and twenty-four Directors elected annually; thirteen or more, of which the governor or deputy-governor must always be one, constitute a court. A governor requires to be possessed of £4000 or upwards of the stock, a deputy-governor £3000, a director £2000, and every elector £500. The directors seldom possess more stock than what is necessary to qualify them for their office. Four general courts of proprietors are held annually, namely, in March or April, July, September, and December. The purpose of these meetings is to make or revise by-laws, to determine questions relating to the institution, and to elect officers—this last usually taking place at the first meeting. Special meetings can be convened at the request of nine or more proprietors qualified as electors.

No account can be opened with the establishment without permission from the directors. If this be granted the bank will then discount approved bills, and receive and pay cash as ordinary bankers; but no deposit-account can be opened with less than £500. No interest is allowed by the bank. The party keeping an account must always have a sum at his credit; and no account is allowed to be overdrawn. Bills or notes (having not more than 95 days to run) including town bills, are now discounted every day instead of once a-week as formerly. But it is a general rule of the bank not to open discount accounts for issuing country bankers and joint-stock banks. It however discounts to such issuing bodies to the extent that may be required to discharge their notes paid into the several branches, and also gives some facilities of a similar kind to banks which afford aid in the collection of the revenue at the time, and to the extent of the aid given. (*Mr G. W. Norman's Evidence*, 1840; *Bank Report*, p. 209.)

A committee of three directors sit daily, and on Thursday the whole court assembles. No important measure is adopted without the assent of the majority of the court; and on particular occasions the directors communicate with the government. These communications are made to the First Lord of the Treasury and the Chancellor of Exchequer, whose opinions are always considered with attention; but they possess no authority for enforcing any change in the bank's arrangements.

The bank's business is divided into two departments; the one under the chief cashier, who transacts the receipts and payments, and issues the notes; the other under the general accountant, who posts these notes as they are issued or paid off, and manages the affairs of the national debt. In 1832 there were employed at the bank 820 clerks and porters, and 38 printers and engravers; and there were also 193 pensioners, chiefly superannuated clerks, who received in pensions £31,243, averaging £161 to each. In the same year the salaries and pensions amounted to £218,003; the house expenses to £39,187; the allowance of the directors was £8000; and the rent of the building was set down at £40,000. The salaries of the officers at the branches amounted to £25,000.

Transactions with Government.—The bank, besides lodging its capital with government, in consideration of the exclusive privileges granted to it, and as a security to the public for payment of its notes, has always performed the ordinary functions of a banker to the state. Since the renewal of the charter in 1833, one-fourth of the *permanent debt* has been repaid, and been thus reduced from £14,686,800 to £11,015,100, upon which interest is at present paid to the bank at the rate of 3 per cent. The bank has, however, been always in the practice of making other considerable advances to government, chiefly in the form of Exchequer bills. Before the exemption from cash-payments in 1797, these advances averaged about £8,000,000; but after that time they increased very considerably, and the general amount in the ten years from 1807 to 1817 was £22,000,000. At present they consist partly of Exchequer bills, but chiefly of a sum of £10,897,880 lent in 1823, to relieve the public finances of the heavy payments on account of the half-pay and pensions due to retired officers, called the "*dead weight*," the consideration granted to the bank, being an annuity of £585,740 for forty-four years until 1867.

The bank acts as the organ of government in paying the dividends on the national debt, and in receiving and registering transfers of stock from one public creditor to another; employing in this department about 400 persons. For this service it receives at present about £130,000 yearly. It likewise renders to the Treasury and other public offices, in daily receiving and paying money, the same services as a private banking house does to its customers. During the late war, owing to the large amount of taxes and loans raised for the public service, the balances at the credit of the different government offices amounted to very considerable sums, at one time even so large as £11,000,000; in consideration of which the bank agreed to lend government £3,000,000 without interest. At present the public deposits fluctuate commonly between three and four millions, upon which no interest is allowed.

Deposits by Private Parties.—These generally varied from one to two millions until the panic of December 1825; but after that time they increased very considerably, and of late years have fluctuated from about four to eight millions. Even this last sum, however, is comparatively small, arising from the fact that the bank directors do not give the same facilities to their customers as is received from private bankers.

Discount of Mercantile Bills.—The bills discounted have varied greatly in amount. When the rate of interest charged by the bank is on a level with the market rate, the number is large, but the reverse when it exceeds that rate. In 1809 and 1810, the average amount of discounts was about seventeen millions. Since the peace, it has seldom exceeded three millions, in consequence of the abundance of money possessed by private bankers, and their charge being commonly lower than that of the other, which is therefore chiefly resorted to for discounts during periods of commercial embarrassment. The annual average of loss by bad debts on discounts was, from 1795 to 1831, both inclusive, £31,696.

Circulation and Regulation of Issues.—No notes under £20 were put into circulation by the bank prior to 1759, in which year notes for £10 were first issued. In 1793, the bank began to issue notes for £5, and £1 and £2 notes were introduced in March 1797, after the bank suspended payment in specie. The issue of the latter, except for a short period at the end of 1825, ceased in 1821; and since the 5th April 1829, no bank in England can issue any note under £5 (7 Geo. IV. c. 6). The paper circulated by the bank at present consists of ordinary notes for £5 and upwards, and of bank post bills, drawn commonly at seven days' sight. The amount of the whole is generally about £18,000,000. In 1833 it was estimated that about three-fourths of the bank's paper money circulated in the metropolitan district; the remaining fourth in the country, particularly Lancashire.

The bank issues are understood to be regulated on the principle that the circulation should be at all times kept full, but without any redundancy, and the means by which this condition of things may be adjusted are, except on extraordinary emergencies, held to be indicated by the state of the foreign exchanges. In the exercise of their powers, however, the directors commonly act with caution. They are aware that under any circumstances a diminution of the currency is unfavourable to trade, lowering the price of commodities, and producing a general dulness in markets. When the foreign exchanges are likely to fall, and it appears incumbent on the bank to contract its issues, the directors profess not to act on opinion, but to wait until an actual demand for gold has been made on the bank. Even then they do not make a direct contraction of their circulation; they merely forbear to issue notes in the place of those which have been returned by the public for gold. The contraction of the circulation is usually effected by raising the rate of discount for bills, sometimes also by the sale of public or other securities; an opposite procedure leads of course to an expansion of it.

The bullion, or *cash reserve*, kept by the bank consists chiefly of gold,—silver seldom exceeding one-fifteenth of the whole. The common rule of the directors is to keep in treasure a sum equal to one-third of their liabilities. This proportion has usually been found sufficient; but the rule is not founded on general principles, and is not closely followed. In ordinary times, and when under a vigilant management, the circulation is limited within the amount which would injuriously affect the foreign exchanges, so large a proportion as one-third cannot be necessary. On the other hand, when by an overissue of paper, prices have been raised so high that gold has become the most profitable commodity for exportation, the experience of the bank has shown that the drain thus arising may be carried to an extent far exceeding the amount necessary to restore the equilibrium of the currency; while in a commercial panic, more especially when aggravated by a political disturbance, it is difficult to say what quantity of treasure would be found adequate short of the amount of the bank's whole liabilities. With the view, however, of being provided as far as possible to meet such contingencies, most of the disposable capital is invested in securities which can, if required, be brought to sale in the stock exchange. This is the case not only with exchequer bills and government stock, but with the greatest of all their assets, the annuity on the dead weight, which might, if necessary, be divided or subdivided into portions fitted for the money market.

Branch Banks were first established by the directors in 1826, at the suggestion, it was said, of the late Lord Liverpool, and for the purpose of lessening the inconvenience arising from the frequent discredit of the country banks. The business of these branches principally consists in discounting bills, issuing notes which are payable in London and in the place where they are issued, and in transmitting money to and from the capital. The towns in which they are established are as follows :—Birmingham, Bristol, Gloucester, Hull, Leeds, Liverpool, Manchester, Newcastle-on-Tyne, Norwich, Swansea, Portsmouth, and Plymouth. The managers of the branch banks allow no interest on deposits, nor do they permit any one to overdraw his account ; the regulations under which they act having been framed so as to avoid interfering with the business of the local banks. The branches further consult the convenience of these banks by receiving gold from those who happen to hold more than they require, and in supplying it to those who stand in need of it. They also lend Bank of England notes to such as think fit to use them instead of their own, by discounting their bills at 3 per cent. interest. The branches were not expected to be productive of profit to the Bank of England, nor have they proved so.

The Profits of the Bank have in general been steady, though, at least in former times, seldom exceeding a certain moderate limit. In 1694 the dividend was 8 per cent. ; and in 1695, 9 per cent. From that year to 1729, it fluctuated between 5½ and 9 per cent. From 1729 to 1747, the rate was 5½ to 6 per cent.: from 1747 to 1753, 5 per cent.; in 1753 it fell to 4½ per cent. After 1767 the dividend was gradually raised to 7 per cent., at which rate it continued till 1805. Before the latter period, however, the exemption of cash-payments in 1797 had increased the income of the bank in two ways ; by extending its circulation, and by saving it the interest sacrificed till then in keeping a stock of bullion. Of the additional profits thus derived, 57½ per cent. was distributed among the proprietors in the form of bonuses, as follows :—10 per cent. in 1799, 5 per cent. in 1801, 2½ per cent. in 1802, 5 per cent. in 1804, 5 per cent. in 1805, and 5 per cent. in 1806. These making 32½ per cent. were paid to the proprietors ; and in 1816, an additional 25 per cent was carried to the credit of each of them in the bank books ; thus increasing the capital from £11,642,400 to £14,553,000. Besides these extra allowances, the bank's ordinary dividend was increased in 1805 from 7 to 12 per cent., which rate was paid in 1805 and 1806. In 1807, it was reduced to 10 per cent. which continued until 1832 ; after which, from a decrease on the profits consequent on the recall of the small notes, and the resumption of cash payments, it was further reduced to 8 per cent. In 1839, a still further reduction was made to 7 per cent., at which rate it has since continued.

The Rest, or Surplus of Undivided Profits, was about £3,000,000 until 1797, after which it increased gradually to eight millions, and led in 1816 to the above mentioned bonus of 25 per cent. It was further reduced in 1817 and 1818 by the expense incurred by the bank in procuring gold from abroad. Its general progress is shown in the annexed statement, from which it will be seen that its present amount is nearly £3,000,000.

Accounts.—The practice of the Bank of England in former times, like the banks of Venice and Amsterdam, was to observe strict secrecy in regard to its accounts, considering this as important to its prosperity. After 1797, the directors reported regularly to government the amount of notes in circulation, which was afterwards published in the newspapers ; but every thing else was kept secret until 1832, when the Report of the Parliamentary Committee on bank affairs gave to the public much information which, until then, had been considered confidential. Of the accounts then published, there is given below a State of its Liabilities, Assets, and Rest, for a series of years since 1780, with continuation, adding for each quarter, commencing with 1834, a statement of the average amount of the Issues, Deposits, Securities, and Bullion of the bank, according to the accounts which the directors are now required to publish in the London Gazette, in terms of act 3 & 4 Wm. IV. c. 98.

Account of the Liabilities, Assets, and Rest or Amount, of Undivided Profits of the Bank of England in the following years :—

			Liabilities.			Assets.			Rest or undivided Profits.
			Circulation.		Deposits.	Securities.		Bullion.	
			Notes under L.5.	Other Notes & Post Bills.		Public.	Private.		
			£	£	£	£	£	£	£
1780	Feb.	29	.. ..	8,410,790	4,723,890	9,145,659	1,755,371	3,581,060	1,347,410
1785	..	28	.. ..	5,923,090	6,669,160	7,198,564	4,973,926	2,740,820	2,321,060
1790	..	..	.. ..	10,040,540	6,223,270	8,347,387	1,984,733	8,633,000	2,701,310
1791	..	..	.. ..	11,439,200	6,364,550	10,380,358	2,222,282	7,869,410	2,668,300
1792	..	29	.. ..	11,307,380	5,523,370	9,938,799	3,129,761	6,468,060	2,705,870
1793	..	28	.. ..	11,888,910	5,346,450	9,549,209	6,456,041	4,010,680	2,780,570
1794	..	..	.. ..	10,744,020	7,891,810	9,950,756	4,573,794	6,987,110	2,875,830
1795	..	..	.. ..	14,017,510	5,973,020	13,164,172	3,647,168	6,127,720	2,948,530
1796	..	29	.. ..	10,729,520	5,702,360	12,951,812	4,188,028	2,539,630	3,247,590
1797	..	28	.. ..	9,674,780	4,891,530	11,714,431	5,123,319	1,086,170	3,357,610
..	Aug.	31	867,585	10,246,535	7,765,350	8,765,224	9,495,946	4,089,620	3,471,320
1798	Feb.	28	1,448,220	11,647,610	6,148,900	11,241,333	5,558,167	5,828,940	3,383,710
1799	..	..	1,465,650	11,494,150	8,131,820	11,510,677	5,528,353	7,563,900	3,511,310
1800	..	..	1,471,540	15,372,930	7,062,680	13,975,663	7,448,387	6,144,250	3,661,150
1801	..	..	2,634,760	13,578,520	10,745,840	15,958,011	10,406,719	4,640,120	4,105,730
1802	..	..	2,612,020	12,574,860	6,858,210	14,199,094	7,760,726	4,152,950	4,067,680
1803	..	..	2,968,960	12,350,970	8,050,240	9,417,887	14,497,013	3,776,750	4,321,480
1804	..	29	4,531,270	12,546,560	8,676,830	14,684,686	12,314,284	3,372,140	4,616,450
1805	..	28	4,860,160	13,011,010	12,083,620	16,889,501	11,771,889	5,883,800	4,590,400
1806	..	..	4,458,600	13,271,520	9,980,790	14,813,599	11,777,471	5,987,190	4,867,350
1807	..	..	4,109,890	12,840,790	11,829,320	13,452,871	13,955,589	6,142,840	4,771,300
1808	..	29	4,095,170	14,093,690	11,961,960	14,149,501	13,234,579	7,855,470	5,068,730
1809	..	28	4,301,500	14,241,360	9,982,950	14,743,425	14,374,775	4,488,700	5,081,090
1810	..	..	5,860,420	15,159,180	12,457,310	14,322,634	21,055,946	3,501,410	5,403,080
1811	..	..	7,114,090	16,246 130	11,445,650	17,201,800	19,920,550	3,350,940	5,667,420
1812	..	29	7,457,030	15,951,290	11,595,200	22,127,253	15,899,037	2,983,190	6,005,960
1813	..	27	7,713,610	15,497,320	11,268,180	25,036,626	12,894,324	2,884,500	6,336,340
1814	..	28	8,345,540	16,455,540	12,455,460	23,630,317	18,359,593	2,204,430	6,937,800
1815	Feb.	28	9,035,250	18,226,400	11,702,250	27,512,804	17,045,696	2,036,910	7,631,510
1816	..	29	9,001,400	18,012,220	12,388,890	19,425,780	23,975,530	4,640,880	8,639,690
1817	..	28	8,136,270	19,261,630	10,825,610	25,538,808	8,739,822	9,680,970	5,736,090
1818	..	..	7,400,680	20,370,290	7,997,550	26,913,360	3,991,970	10,055,460	5,192,270
1819	..	27	7,354,230	17,772,470	6,413,370	22,355,115	9,099,885	4,184,620	4,090,550
1820	..	29	6,689,130	16,794,980	4,093,550	21,715,168	4,472,322	4,911,050	3,520,880
1821	..	28	6,437,560	17,447,360	5,622,890	16,010,990	4,785,280	11,869,900	3,158,360
1822	..	..	1,374,850	17,290,500	4,689,940	12,478,133	3,494,947	11,057,150	3,674,940
1823	..	..	681,500	17,710,740	7,181,100	13,658,829	4,060,901	10,384,230	3,130,620
1824	..	..	486,130	19,250,860	10,097,850	14,341,127	4,530,873	13,810,060	2,847,220
1825	..	..	416,730	20,337,030	10,168,780	19,447,588	5,503,742	8,779,100	2,867,890
..	Aug.	31	396,340	19,002,500	6,410,560	17,414,566	7,691,464	3,634,320	2,930,950
1826	Feb.	28	1,375,250	24,092,660	6,935,940	20,573,258	12,345,322	2,459,510	2,974,240
..	Aug.	31	1,161,260	20,402,300	7,199,860	17,713,881	7,369,749	6,754,230	3,074,440
1827	Feb.	28	661,390	21,229,220	8,801,660	18,685,015	4,844,515	10,159,020	2,996,280
1828	..	29	416,260	21,564,450	9,198,140	19,818,777	3,762,493	10,347,290	2,749,710
1829	..	28	356,830	19,514,020	9,553,960	19,736,665	5,648,085	6,835,020	2,794,960
1830	..	27	320,490	19,730,240	10,763,150	20,038,890	4,165,500	9,171,000	2,561,510
1831	..	28	306,870	19,293,270	11,213,530	19,927,572	5,281,408	8,217,050	2,612,360
1832	..	29	299,100	17,752,610	8,937,170	18,497,448	5,836,042	5,293,150	2,637,760
1834	July	29	.. ..	19,110,000	15,675,000	28,502,000		8,598,000	2,315,000
..	Oct.	21	.. ..	18,914,000	13,514,000	27,840,000		7,123,000	2,535,000
1835	Jan.	15	.. ..	18,012,000	12,585,000	26,390,000		6,741,000	2,534,000
..	April	7	.. ..	18,591,000	11,289,000	26,228,000		6,329,000	2,677,000
..	July	28	.. ..	18,322,000	11,561,000	26,244,000		6,283,000	2,644,000
..	Oct.	20	.. ..	17,930,000	14,227,000	28,661,000		6,186,000	2,690,000
1836	Jan.	12	.. ..	17,262,000	19,169,000	31,954,000		7,076,000	2,599,000
..	April	5	.. ..	18,063,000	14,751,000	27,927,000		7,801,000	2,914,000
..	July	28	.. ..	17,940,000	14,495,000	28,315,000		6,926,000	2,806,000
..	Oct.	21	.. ..	17,936,000	13,324,000	28,845,000		5,257,000	2,842,000
1837	Jan.	10	.. ..	17,422,000	14,354,000	30,365,000		4,287,000	2,476,000
..	April	4	.. ..	18,432,000	11,192,000	28,843,000		4,071,000	3,290,000
..	July	25	.. ..	18,261,000	10,672,000	26,727,000		5,226,000	3,020,000
..	Oct.	17	.. ..	18,716,000	10,501,000	25,316,000		6,856,000	2,955,000
1838	Jan.	9	.. ..	17,900,000	10,992,000	22,606,000		8,895,000	2,609,000
..	April	3	.. ..	18,987,000	11,262,000	22,838,000		10,126,000	2,715,000
..	July	24	.. ..	19,286,000	10,424,000	22,601,000		9,749,000	2,640,000
..	Oct.	16	.. ..	19,359,000	9,327,000	22,015,000		9,437,000	2,765,000
1839	Jan.	8	.. ..	18,201,000	10,315,000	21,680,000		9,336,000	2,500,000
..	April	2	.. ..	18,371,000	8,998,000	22,987,000		7,073,000	2,691,000
..	July	23	.. ..	18,049,000	7,955,000	24,905,000		3,785,000	2,686,000
..	Oct.	15	.. ..	17,612,000	6,734,000	24,939,000		2,525,000	3,118,000
1840	Jan.	7	.. ..	16,366,000	7,136,000	22,913,000		3,454,000	2,865,000
..	April	28	.. ..	16,831,000	7,296,000	22,726,000		4,318,000	2,917,000
..	July	21	.. ..	16,951,000	7,578,000	22,865,000		4,529,000	2,865,000

1. The returns since 1834 are formed upon the average of the preceding quarter. The amounts on each Saturday night, for thirteen weeks in succession, are added together, and the sum divided by thirteen; this gives the average of the quarter. Hence these returns do not show the *progress of the affairs of the Bank during the quarter.* For instance, the amount of notes in circulation may be high in the beginning of the quarter, and low at the end of the quarter, *or the reverse;* or the amounts may be low at both the beginning and the end, and high in the middle of the quarter, *or the reverse*—and yet all these cases may produce the same average.

2. "The circulation" includes the notes of the head-office, and of all the branches; it also includes the Bank Post Bills issued at the former, and the drafts drawn by the branches upon the parent establishment, or upon each other. The bank did not publish the branch circulation separately until the year 1840, when it was furnished to the Parliamentary Committee on Banks of Issue, from whose Report it appears to have fluctuated in the years 1838 and 1839 from £3,723,000 to £4,397,000.

3. The deposits include those at the head-office and all the branches.

4. The securities also include those at the head-office and at the branches: they are formed of bills under discount, Exchequer bills, the dead weight, and other government securities, loans on mortgage, &c.

5. The bullion includes both gold and silver, whether coined or uncoined, and whether at the head-office or the branches.

6. The difference between the liabilities and the assets forms the "rest," or surplus capital, arising out of accumulated profits, and which is over and above the capital of £14,553,000, upon which the dividends are paid to the proprietors.

The defects of the quarterly returns have been supplied by the last report of the Committee on Banks of Issue (*Par. Paper of 7th August* 1840, *No.* 602), the Appendix to which contains a weekly statement of the liabilities and assets of the bank from March 1832 to March 1840. The following is a copy of the last of these statements:—

Bank of England, March 31, 1840.

Liabilities.		
Circulation:		
London	£12,446,000	
Country	3,952,000	
		16,398,000
Deposits, Public, viz.:		
Exchequer Account	806,000	
For payment of dividends	393,000	
Savings Banks	18,000	
West India Compensation	.. ..	
Other public accounts	1,187,000	
		2,404,000
Deposits, Private, viz.:		
London Bankers	740,000	
East India Company	603,000	
Loan from ditto	.. ..	
Bank of Ireland, & Royal Bank of Scotland	70,000	
Other deposits	2,141,000	
Deposits at Branches	472,000	
		4,026,000
		£22,828,000

Assets.		
Public Securities:		
Advances on Exchequer Bills:		
Deficiency	£340,000	
Other Exchequer bills	481,000	
Exch. Bills purchased	1,050,000	
Stock and Annuities	10,132,000	
		12,003,000
Private Securities:		
Bills discounted:		
London	791,000	
Country	3,275,000	
		4,066,000
East India Bonds	.. ..	
City Bonds, &c.	1,359,000	
Mortgage	1,296,000	
Advances:		
Bills of Exchange	2,267,000	
Exch. Bills, Stock, &c.	335,000	
		5,257,000
		£21,326,000
Bullion,		4,446,000
		£25,772,000

IV. London Bankers.—The private bankers in London were formerly the goldsmiths, as already noticed, who, after a time, gradually relinquished their original pursuit and became exclusively bankers. They issued notes, and continued to do so even after the establishment of the Bank of England; but from this branch of business they have long since withdrawn. There are at present fifty-four private banking-houses in London, and of these, three, namely, Messrs Child and Company, Messrs Hoares and Company, and Messrs Snows and Company, were in existence before the Bank of England. Their business chiefly consists in acting as depositaries of money, discounting bills, and officiating as agents for banks out of London. They allow no interest on deposits; but, on the other hand, they charge no commission for paying the drafts of those who keep accounts, or for the trouble of presenting their cheques and bills for payment; the balance at their credit being considered a sufficient remuneration for keeping the account, and this balance is expected to be large or small, according to the number, amount, and nature of the transactions. They likewise afford considerable facilities to their customers, both in discounting bills, and by temporary loans, with or without security, according to circumstances. Bills for other parties are commonly discounted through the medium of brokers. This branch of business they transact with great advantages as to security, from the unreserved confidence which they are accustomed to place in one another as to the credit of their respective customers.

"The deposits held by the London bankers are generally composed of very large sums, which are necessarily payable on demand; and hence they cannot be made use of to the same extent as those which are intrusted to country bankers, and which, whenever interest is allowed, are usually left with them for a stipulated period." "The London banks, in order to be able to meet their engagements, usually keep a large deposit, nearly equal perhaps to half of what they hold in reserve in the Bank of England; a portion of their current funds they necessarily hold at home in bank-paper, and a small amount in gold." "In order to turn their funds to profit, the London bankers employ as much money as they can amongst their customers. They invest a considerably larger proportion of their deposits in bills of exchange and promissory notes than in public securities. The city banker is, however, under a disadvantage in this respect which is not felt by the banker at the west end of the town. The latter may, to a certain extent, depend upon the use of the money deposited with him, as his accounts are usually those of country gentlemen and individuals out of trade; whereas the former, whose accounts are principally those of persons actively engaged in commercial or money operations, can hardly know three days beforehand what the amount of his deposits may be at any given period. The London bankers are obliged to employ their money occasionally at a very low rate of interest." (*Mr Glyn's Evidence*, 1832.)

The *Clearing-House* was instituted by the London bankers about the year 1775, in order to save the time, risk, and inconvenience of sending round to each other for payment of the numerous cheques which they daily receive from their customers.

"In a large room in Lombard Street, about thirty clerks from the several London bankers take their stations, in alphabetical order, at desks placed round the room; each having a small open box by his side, and the name of the firm to which he belongs in large characters on the wall above his head. From time to time other clerks from every house enter the room, and, passing along, drop into the box the cheques due by that firm to the house from which this distributor is sent. The clerk at the table enters the amount of the several cheques in a book previously prepared, under the name of the bank to which they are respectively due." "At four o'clock all the boxes are removed, and each clerk adds up the amount of the cheques put into his box and payable by his own to other houses. He also receives another book from his own house, containing the amounts of the cheques which their distributing clerk has put into the box of every other banker. Having compared these, he writes out the balances due to or from his own house opposite the name of each of the other banks; and having verified this statement by a comparison with the similar list made by the clerks of those houses, he sends to his own bank the general balance resulting from this sheet, the amount of which, if it is due from that to other houses, is sent back in bank notes. At five o'clock the inspector takes his seat; when each clerk, who has, upon the result of all the transactions, a balance to pay to various other houses, pays it to the inspector, who gives a ticket for the amount. The clerks of those houses to whom money is due, then receive the several sums from the inspector, who takes from them a ticket for the amount. Thus the whole of these payments are made by a double system of balance, a very small amount of bank notes passing from hand to hand, and scarcely any coin."

"It is difficult to form a satisfactory estimate of the sums which daily pass through this operation: they fluctuate from two millions to perhaps fifteen. About two millions and a half may possibly be considered as something like an average, requiring for its adjustment perhaps £200,000 in bank notes, and £20 in specie. By an agreement between the different bankers, all cheques which have the name of any firm written across them must pass through the clearing-house; consequently, if any such cheque should be lost, the firm on which it is drawn would refuse to pay it at the counter; a circumstance which adds greatly to the convenience of commerce. The advantage of this system is such, that two meetings a-day have been recently established—one at twelve, the other at three o'clock; but the payment of balances takes place once only, at five o'clock. If all the private banks kept accounts with the Bank of England, it would be possible to carry on the whole of these transactions with a still smaller quantity of circulating medium." (*Babbage's Economy of Machinery and Manufactures.*)

The establishment of the clearing-house has led to new arrangements in several branches of business. The stockbrokers for instance now settle all their receipts and payments by cheques, to be paid through the clearing-house: the cheques which a broker draws on his banker being paid by the cheques of other brokers which he lodges to his credit. The colonial brokers and other classes have fixed days for settling their accounts, and on these days draw cheques on their bankers in the morning, and deposit others to meet them at a subsequent part of the day. The institution of the clearing-house has thus become entwined with the general commerce of the country.

Metropolitan Joint-stock Banks.—Of late years several extensive joint-stock banks have been established in the capital, as the *London and Westminster*, the *London Joint-stock*, the *Metropolitan*, the *Union*, and others. These banks conduct their business in some respects differently from the private bankers, particularly in reference to deposits on which they allow interest; charging likewise a commission upon the drawing accounts instead of requiring a balance. They are viewed with jealousy by the Bank of England as well as the private bankers, by whom they are excluded from the clearing-house; but being powerfully supported, they have been enabled successfully to meet this opposition; and it is considered probable that their number will increase.

V. English Provincial Banks.—The act of 1708 exercised an unfavourable influence upon the banking business out of London, the prohibition of the number of partners to six, having, as already noticed, been understood to apply not to banks of issue alone, but to banks of all kinds. At the time the enactment took place, and for many years after, the extent of injury arising from it was not perceived, as there were few provincial banks in England, and consequently few failures among them; but during the greater part of the last half century, the case has been very different. After 1770, the increase of town population, consequent on the progress of the cotton and iron manufactures, occasioned an addition to the number of banks; and during the ten years of prosperity and peace (1783-93) which followed the close of the American war, they multiplied with great rapidity. The sudden check, however, which was given to trade by the transition from peace to war in 1793, fell directly on the provincial banks, and by causing twenty-two of them to declare their insolvency in one year, brought into view the pernicious effect of the act of 1708. In 1797, when their number was about 280, leave was given to them, as well as to the Bank of England, to issue £1 and £2 notes. This privilege having been coupled with the important one of not paying their notes in cash, an extraordinary extension of their business suddenly took place; and between 1797 and 1814 their number increased to 900. In the course of the three years 1814, 1815, and 1816, however, ninety insolvencies occurred, and an equal number of dissolutions of partnership, which reduced the number of banks to between seven and eight hundred. In the year of speculation, 1825, their number again increased, but it was once more reduced by the failure of eighty in that and the following year. These stoppages, and the injury which resulted from them, at last forced the defective constitution of the provincial banks upon the attention of the government, and this more particularly from the contrast presented by the state of banking in Scotland, where, for upwards of a century, scarcely a single bank of issue had proved insolvent in consequence chiefly of the non-existence of the limitation in question. Accordingly, in 1826, the act 7 Geo. IV. c. 46, was passed, allowing joint-stock banks to be formed in all places beyond the metropolitan district, it being at the same time arranged (7 Geo. IV. c. 46, § 15) that the Bank of England should establish branches, and that notes under £5 should be withdrawn from circulation by April 5, 1829. By a subsequent act in 1833, the provincial banks were allowed to tender Bank of England notes instead of gold in exchange for their notes.

Statutory Regulations.—These are principally embodied in 7 Geo. IV. c. 46, and 3 & 4 Wm. IV. c. 83, already noticed.

The statute first mentioned, enacts (§ 1), that copartnerships or societies, though consisting of more than six persons, may be bankers in England, and may issue notes, provided such copartnerships shall have the whole of their banking establishments beyond sixty-five miles from London, and that all the partners are liable for the whole debts of the bank; and (§§ 4, 5) that a return be made to the Stamp-office, before commencing business, and between the 28th February and 25th March annually, of the name of their firm, of the names and places of abode of all their partners, of the places where the banks are established, and of two or more of their number who shall have been appointed public officers, which returns shall be open for the inspection of the public on payment of one shilling for every search. (§ 8) Special returns must be made of any additional public officers, of all retiring and newly-appointed partners, and of any new agencies. (§ 9) Such banking companies are entitled to sue and be sued in the name of their public officers; and (§§ 12, 13) when judgment is obtained against such public officers, execution may be issued against any member of the copartnership. (§ 16) The banks are allowed to compound for the stamp-duties on their notes at the rate of 7s. per annum for every £100 in circulation. (§ 17) If a company issuing notes has two, three, or four places of issue, a license is required for each; but four licenses will suffice for any number of places of issue. (§ 18) A company delaying to make the said return to the Stamp-office forfeits £500 per week during the delay, and, if a false return is made, £500 is forfeited by them, and £100 by the officer who makes the return.

The statute 3 & 4 Wm. IV. c. 83, enacts (§ 1), that partnerships and persons carrying on banking business and issuing notes shall make returns to the Stamp-office, London, of the average amount of notes in circulation in the quarters ending January 1, April 1, July 1, and October 1, in each year; the quarterly average to be formed from the amount in circulation at the end of each week; such returns to be verified on oath, and to be made under a penalty for default of £500. (§ 2) Banks of more than six persons may draw on any agent in London on demand, or otherwise, for less than £50, notwithstanding the provision to the contrary in the act 7 Geo. IV. c. 46.

The temporary acts, 1 & 2 Vict. c. 96, and 3 & 4 Vict. c. 111, contain provisions applicable to legal proceedings by joint-stock banking companies against their own members, and by such members against the companies. The 3 & 4 Vict. c. 111, likewise provides for the punishment of members of banking companies embezzling notes, &c.

The statute 55 Geo. III. c. 184, imposed the following stamp-duties on the notes of country bankers; namely—not exceeding £1, 1s.,—5d.; exceeding £1, 1s. and not exceeding £2, 2s.,—10d.; from £2, 2s. to £5, 5s.,—1s. 3d.; from £5, 5s. to £10,—1s. 9d.; from £10 to £20,—2s.; from £20 to £30,—3s.; from £30 to £50,—5s.; from £50 to £100,—8s. 6d.

Nature of Business.—All the provincial banks discount bills, grant advances or credits on accounts, effect remittances, and receive deposits on which they allow interest; but their mode of transacting business is not uniform.

On current accounts, they allow from 2½ to 4 per cent. interest,—a commission of ¼ per cent. being charged on all sums paid by the bank, besides from 4 to 5 per cent. interest on overdrafts; the usages in this respect, however, differ much in different districts. Advances are often made without security, but more commonly upon a promissory note by the party with sureties; sometimes also upon bonds, and the lodgement of title-deeds. The rate of interest allowed on deposits varies from about 2 to 3 per cent., and notice is in general required before any considerable sum can be withdrawn. Current or drawing accounts are balanced half-yearly; and bills lodged by parties having such accounts, are passed to their credit, as on June 30, and December 31. English bills are always made payable at a London bank, a circumstance which facilitates their circulation, and enables provincial bankers more readily to meet any exigency by rediscounting them. The London agent of a provincial bank is paid for his trouble either by a certain amount being allowed to remain in his hands without interest, by a commission on his payments, or by a fixed annual sum.

Most of these banks issue notes which are often made payable at their London agent's establishment, as well as at their own. The profits from this source were reduced by the suppression of those under £5, which, prior to 1829, formed about one-half of the circulation; but the reduction is estimated at only 30 per cent., owing to the larger amount of other notes since taken by the public.

There are exchanges of notes between the banks in the country towns either once or twice a-week as may be arranged, and the balance is paid by an order at sight upon London. The system of exchanges is less comprehensive than in Scotland; but in that part of the island, the circulation of the larger banks is very widely diffused through their numerous branches; whereas, the country circulation of England pretty much divides and restricts itself to particular districts, and within which, in each case, the issues of the several banks almost exclusively circulate. Any notes that find their way beyond such limits are of trifling amount, and are speedily returned to the banks by whom they were issued, or their London agents.

Account showing the Amount of Notes circulated in England and Wales by Private Banks, and Joint-stock Banks and their Branches, from Returns under 3 & 4 Wm. IV. c. 83.

Quarters to	Private.	Joint Stock.	Total.	Quarters to	Private.	Joint Stock.	Total.
	£	£	£		£	£	£
1833. Dec. 28..	8,836,803	1,315,301	10,152,104	1837. April 1..	7,275,784	3,755,279	11,031,06
1834. March 29..	8,733,400	1,458,427	10,191,827	— July 1..	7,187,673	3,684,764	10,872,437
— June 28..	8,875,795	1,642,887	10,518,682	— Sept. 30..	6,701,996	3,440,053	10,142,04
— Sept. 27..	8,370,423	1,783,689	10,154,112	— Dec. 30..	7,043,470	3,826,665	10,870,13
— Dec. 28..	8,537,655	2,122,173	10,659,828	1838. March 31..	7,005,472	3,921,039	10,926,511
1835. March 28..	8,231,206	2,188,954	10,420,160	— June 30..	7,383,247	4,362,256	11,745,50
— June 27..	8,455,114	2,184,687	10,939,101	— Sept. 29..	7,083,811	4,281,151	11,364,96
— Sept. 26..	7,912,587	2,508,036	10,420,623	— Dec. 31..	7,599,942	4,625,546	12,225,48
— Dec. 26..	8,334,863	2,799,551	11,134,414	1839. March 30..	7,642,104	4,617,363	12,259,467
1836. March 26..	8,353,894	3,094,025	11,447,919	— June 29..	7,610,708	4,665,110	12,275,818
— June 25..	8,614,132	3,588,064	12,202,196	— Sept. 28..	6,917,657	4,167,313	11,684,97
— Sept. 24..	7,764,824	3,969,121	11,733,945	— Dec. 28..	7,251,678	4,170,767	11,422,445
— Dec. 31..	7,753,500	4,258,197	12,011,697	1840. Mar. 28..	6,893,012	3,940,232	10,833,24

ENGLISH PROVINCIAL JOINT STOCK BANKS.

(The capital, and the circulation of these banks which issue notes, are stated according to the House of Commons Report for 1836, Par. Paper No. 591, and their Report for 1837, P. P. No. 531. The number of partners and branches* are shown for 1839, according to Return to the House of Commons in that year, P. P. No. 530.)

Designation.	Head Office.	Founded.	No. of Partners.	No. of Branches.	Advanced Capital, 1836-37.	Circulation in Quarter to Dec. 31, 1836.
					£	£
Ashton, Staleybridge, Hyde & Glossop B.	Ashton.	1836	292	0	20,330	....
Barnsley Banking Company	Barnsley	1832	111	0	25,100	8,247
Bilston District Banking Company	Bilston	1836	131	0	27,375	9,706
Birmingham Banking Company	Birmingham	1829	465	0	50,000	....
.. .. Bank of	.. ..	1832	240	0	73,785	22,379
.. .. Town and District Bank. Co.	.. ..	1836	397	0	....	....
.. .. and Midland Bank	.. ..	1836	180	0	36,400	....
.. .. Borough Bank	.. ..	1837	90	0	....	....
Bolton, Bank of	Bolton	1836	165	0	20,670	....
Bradford Banking Company	Bradford	1827	165	0	77,900	33,019
.. .. Commerical Joint-stock Bg. Co.	.. ..	1833	159	0	48,095	20,575
Bristol Old Bank	Bristol	1826	7	0	140,000	104,352
Bury Banking Company	Bury	1836	108	0	63,925	8,256
Bury and Heywood Banking Company	.. ..	1836	48	0	....	....
Carlisle and Cumberland Banking Co.	Carlisle	1836	275	2	50,950	6,997
Carlisle City & District Banking Company.	.. ..	1837	315	1	....	....
Cheltenham & Gloucestershire Bank	Cheltenham	1836	157	1	22,625	9,556
Chesterfield & North Derbyshire Bank. Co.	Chesterfield	1832	96	0	23,380	16,255
Commercial Bank of England	Manchester	1834	627	16	262,485	113,527
County of Gloucester Bank	Gloucester	1836	276	8	176,750	87,424
Coventry and Warwickshire Banking Co.	Coventry	1835	276	1	43,490	31,225
Coventry Union Banking Company	.. ..	1836	152	4	32,700	18,439
Cumberland Union Banking Company	Workington	1829	149	5	18,810	36,870
Darlington District Joint-stock Bank. Co.	Darlington	1832	341	14	55,425	73,285
Derby and Derbyshire Banking Company.	Derby	1834	187	1	40,900	27,656
Devon and Cornwall Banking Company	Plymouth	1832	196	14	56,820	110,762
Dudley and Westbromwich Banking Co.	Dudley	1833	179	1	32,325	42,030
East of England Bank	Norwich	1836	501	26	156,322	84,574
Glamorganshire Banking Company	Swansea	1836	102	1	32,500	...
Gloucestershire Banking Company	Gloucester	1831	258	5	100,000	76,132
Gloucester County and City Bank	.. ..	1835	..	..	19,720	....
Halifax Joint-stock Banking Company	Halifax	1829	207	0	44,475	25,396
.... Commercial Banking Company	.. ..	1836	164	0	65,000	13,348
.... and Huddersfield Banking Co.	.. ..	1836	394	1	83,775	44,549

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* The number of branches, though taken from a return made by the Stamp-office, is not always accu-, as it is a common practice of the banks to insert in their licenses places where circumstances may e them to establish branches, but where none were in existence at the time the license was granted.

Designation.	Head Office.	Founded.	No. of Partners.	No. of Branches.	Advanced Capital, 1836-37.	Circulation in Quarter t Dec. 31, 183
					£	£
Hampshire Banking Company	Southampton	1834	172	2	28,445	26,466
Helston Banking Company	Helston	1836	17	0	4,190	2,896
Herefordshire Banking Company	Hereford	1836	131	7	30,300	....
Huddersfield Banking Company	Huddersfield	1827	330	0	65,180	38,580
Hull Banking Company	Hull	1833	240	6	41,950	74,960
Imperial Bank of England	Manchester	1836	654	6	73,580	....
Knaresborough and Claro Banking Co.	Knaresborough	1831	161	10	21,620	37,944
Lancaster Banking Company	Lancaster	1826	135	2	60,750	48,701
Leamington Bank	Leamington	1835	167	0	40,125	287
.. .. Priors& Warwickshire Bg. Co.	.. ..	1835	104	4	22,920	24,145
Leeds Banking Company	Leeds	1832	398	0	120,450	34,193
.... & West Riding Banking Company	.. ..	1835	224	1	67,725	37,695
.... Commercial Banking Company	.. ..	1836	221	0	50,000	21,975
Leicestershire Banking Company	Leicester	1829	144	4	49,440	36,332
Lichfield, Rugeley, & Tamworth Bank. Co.	Lichfield	1835	150	2	28,000	....
Lincoln & Lindsey Banking Company	Lincoln	1833	230	11	53,510	67,055
Liverpool, Bank of,	Liverpool	1831	529	0	380,170	....
.. .. Commercial Banking Company	.. ..	1832	306	0	338,900	....
.. .. Union Bank of	.. ..	1835	338	0	257,350	....
.. .. Tradesmens' Bank	.. ..	1836	465	0	94,375	....
.. .. Albion Bank	.. ..	1836	364	0	....	....
.. .. Royal Bank of,	.. ..	1836	257	0	352,930	....
.. .. Banking Company	.. ..	1836	192	0	....	....
.. .. United Trades' Bank	.. ..	1836	324	0	106,700	....
.. .. Borough Bank	.. ..	1836	401	0	206,225	....
.. .. Central Bank of	.. ..	1836	40	0	5,790	....
.. .. Phœnix Bank	.. ..	1837	136	0	....	....
Manchester, Bank of	Manchester	1829	660	4	741,030	136,366
.. .. & Liverpool District Bank	.. ..	1829	1287	22	749,725	616
.. .. Union Bank of	.. ..	1836	411	0	155,425	....
.. .. & Salford Bank	.. ..	1836	225	0	271,900	....
Monmouth and Glamorganshire Bank. Co.	Newport	1836	328	10	128,580	32,879
Moore & Robinson Nottinghamsh. Bg. Co.	Nottingham	1836	157	0	51,282	22,433
National Provincial Bank of England	London	1833	712	69	367,635	329,480
Newcastle-on-Tyne Joint-stock Bank. Co.	Newcastle	1836	55	0	20,317	3,835
Newcastle, Shields, and Sunderland Union Joint-stock Banking Company	.. ..	1836	462	10	115,168	58,798
Newcastle Commercial Banking Company	.. ..	1836	162	0	20,425	4,372
Northamptonshire Banking Company	Northampton	1836	316	3	47,630	33,657
.. .. Union Bank	.. ..	1836	420	2	107,500	89,776
Northern and Central Bank of England	Manchester	1834	1088	0	711,860	305,082
North of England Joint-stock Banking Co.	Newcastle	1832	610	21	240,000	105,670
North & South Wales Bank	Liverpool	1836	476	43	150,360	52,358
Northumberland & Durham District Bank.	Newcastle	1836	303	5	123,812	....
North Wilts Banking Company	Melksham	1835	228	13	37,975	60,152
Nottingham and Nottinghamshire Bank. Co.	Nottingham	1834	334	6	81,450	52,522
Oldham Banking Company	Oldham	1836	58	0	10,210	2,296
Pares' Leicestershire Banking Company	Leicester	1836	53	3	16,350	30,133
Saddleworth Banking Company	Saddleworth	1833	107	2	30,850	20,790
Sheffield Banking Company	Sheffield	1831	210	1	92,170	35,778
.. .. & Hallamshire Banking Company.	.. ..	1836	638	0	114,057	18,771
.. .. & Rotherham Joint-stock Bg. Co.	.. ..	1836	275	2	33,125	48,295
Shropshire Banking Company	Shiffnal	1836	270	3	40,215	50,509
Stamford, Spalding, & Boston Banking Co.	Stamford	1831	87	15	44,080	68,748
Stockport, Bank of	Stockport	1836	315	0	66,625	....
Stockton and Durham County Bank	Stockton	1838	122	0	....	....
Stourbridge & Kidderminster Banking Co.	Stourbridge	1834	195	9	45,000	67,167
Stuckey's Banking Company	Bristol	1826	47	26	65,000	289,070
South Lancashire Bank	Manchester	1836	362	0	150,212	....
South Wales, Bank of	Carmarthen	1835	7	0	17,500	6,560
Southern District Banking Company	Southampton	1837	109	8	....	....
Sunderland Joint-stock Banking Company	Sunderland	1836	145	0	30,575	....
Swaledale & Wensleydale Banking Comp.	Richmond	1836	218	9	26,325	....
Wakefield Banking Company	Wakefield	1832	196	0	44,920	10,950
Walsall & South Staffordshire, Bank of	Walsall	1835	149	1	30,575	16,680
Warwick & Leamington Banking Company.	Warwick	1834	111	6	32,900	43,505
West Riding Union Banking Company	Huddersfield	1832	480	2	63,900	40,360
Westmoreland, Bank of	Kendal	1833	153	0	21,450	21,376
West of England and South Wales District Bank	Bristol	1834	565	12	213,530	76,405
Western District Banking Company	Plymouth	1836	322	7	30,600	17,880
Wilts and Dorset Banking Company	Salisbury	1836	442	19	63,105	74,976
Whitehaven Joint-stock Banking Company	Whitehaven	1829	228	1	28,050	42,331
.. .. Bank of	.. ..	1837	121	1	....	....
Wolverhampton & Staffordshire Bank. Co.	Wolverhampton	1831	230	0	50,000	51,228
York City and County Banking Company	York	1830	263	7	75,000	94,500
.. Union Banking Company	.. ..	1833	271	10	63,000	81,090
Yorkshire District Bank	Leeds	1834	1055	30	389,985	231,483
.. .. Agricultural and Commer. Bg Co.	York	1836	618	6	72,875	16,224

VI. Scottish Banks.—The introduction of banking into Scotland took place in 1695, in which year the *Bank of Scotland* was founded, with a capital of £100,000 sterling (or £1,200,000 Scots); but such was then the poverty of the country, that not more than £30,000 were for a considerable time called up, and a large portion even of this sum was advanced by natives of Holland, Hamburg, and England. It remained the only bank until 1727, when the *Royal Bank* was established by the subscription of £111,347 : 19 : 10 of the stock of the Equivalent Company, an association which acquired right to the greater part of the compensation (£398,085, 10s.) granted by parliament to Scotland at the Union in 1707. In 1746, the *British Linen Company* was chartered, with a capital of £100,000, and, having shortly thereafter abandoned the linen trade, became exclusively a banking concern. Smaller banks were soon afterwards instituted in different parts of the country. The expansion of the national resources which occurred after the close of the American war in 1783, naturally led, as in the south, to a great increase of business, and considerable additions were then made to the capital of the larger banks, while about the same time they established branches in the several counties. The banks have since increased with the advancing prosperity of the country, and their number at present is about thirty, which have mostly numerous bodies of partners, as the act of 1708, limiting the number in English banks to six, did not extend to Scotland. Five of these possess charters, which, however, confer upon them no privileges, in regard either to the issue of notes or any other department of business. The charters of the three oldest are by some said to have the effect of restricting the liability of the partners to the amount of their shares; but, however this may be, no doubt is entertained that the responsibility of the partners of all the others extends to the full amount of their property, both real and personal: this circumstance has contributed powerfully to the solidity of the Scottish banks.

Notes payable to the bearer on demand were first issued in 1704, by the Bank of Scotland. During last century, these were frequently circulated for smaller sums than £1; and at one period, owing to the runs made by the banks upon each other, they were made payable either on demand, or six months after with interest; but these practices were suppressed in 1765. In 1826, when Parliament prohibited one pound notes in England, a similar attempt was made in regard to North Britain; but, a Committee being called for by the Scottish members, the result was, a determination not to interfere with the existing system.

The Statutory Regulations are principally embodied in the 5 Geo. III. c. 49, which requires that all bank-notes, circulated like specie, shall be made payable on demand, and prohibits those for sums under £1; and in the 7 Geo. IV. c. 67, the enactments of which are similar to those of the 7 Geo. IV. c. 46, already quoted in reference to England. In the act 7 Geo. IV. c. 67, however, the period within which the yearly returns of managers, branches, and partners, must be made to the Edinburgh Stamp-office, is from May 25 to July 25. The stamp-duties payable on notes are the same as in England.

Business Operations.—These possess a more uniform character than in the south, owing chiefly to the circumstance, that the Edinburgh banks have long had branches established over all the country, in which business is transacted in the same manner as at the head offices. The exchange regulations, afterwards explained, have likewise contributed to this result, by producing a kind of federative connexion between the banks themselves. The system which has thus grown up, will, however, be best explained in detail.

1. Deposits are received of sums from £10 upwards, which are repaid on demand, with interest at a rate varying from 2 to 3 per cent. They are composed in nearly equal parts of *Deposit Receipts* granted for money allowed to lie for considerable periods, and of *Deposit Accounts*, or drawing accounts, which are balanced yearly. The banks make no charge for keeping these accounts, but are supposed to be remunerated by the note circulation connected with the operations upon them. No overdrafts are allowed as in England. The amount of deposits in the Scottish banks is estimated at £25,000,000, nearly one-half consisting of sums not exceeding £200.

2. Cash-credit Accounts, the nature of which has been already explained, form a characteristic feature in the Scottish system, into which they were introduced by the Royal Bank in the year 1729. The sureties, commonly two in number, are bound jointly and individually with the principal, for the balance which shall ultimately arise, including all his liabilities to the amount of the bond. These credits are also granted on the security of real property, and occasionally, under certain restrictions, of the bank-stock. The interest charged on the current balances is commonly the same as the market-rate of discount on bills; occasionally it is one-half per cent. higher; but no commission is ever charged, the banks looking, as in the case of deposit-accounts, to the note circulation arising out of the operations on the accounts, as their remuneration for the trouble of keeping them. On this ground, cash-credits are not allowed to continue as dead loans: unless frequently operated upon, they are withdrawn. The number of these accounts at present in Scotland is estimated at 15,000, and the total amount of the bonds, £7,500,000, nearly two-thirds of

which are supposed to be drawn out. The bonds are rarely for sums exceeding £5000, or below £100; their average amount is about £500.

3. Bills are discounted at a rate varying in general from 4 to 5 per cent., and a commission is seldom charged. The practice in Scotland, with regard to bills, differs from that of England, in respect that comparatively few are made payable in London; and they are never credited by the bank to parties keeping accounts at stated periods half yearly, as common in that country.

4. The issue of notes is intimately connected with all the operations of the Scottish banks, and by the profits derived from it, they are enabled to transact business, particularly as regards deposits and cash-credits, on a footing highly advantageous to the public. The notes issued at present are for sums of £1, £5, £10, £20, and £100; and, with the exception of silver and copper coins, they compose almost the entire circulation. They are convertible at the head offices into gold, or notes of the Bank of England. The amount in circulation varies, being greatest at the money terms; but, on an average, is nearly £3,250,000, about one-half of which consists of £1 notes.

5. The Scottish banks also negotiate bills on all parts of the United Kingdom, and on many places abroad—buy and sell for their customers stock in the public funds—draw the dividends thereon—and effect remittances from one part of the kingdom to another, by means of letters of credit or bills; the par date for those from Edinburgh or Glasgow on London being 20 days. They likewise facilitate remittances to many other countries, by means of bills drawn at a certain date on their agents in London; which bills, after being sent abroad, are again readily purchased for remittances to Britain. This branch of business has greatly increased since the opening of the trade to India and China. "We perceive," says the author of the *Commerce, Money, and Banking of India*, "that in the Calcutta price currents the rates of Scotch bank bills are regularly quoted. We have one of these bills now before us of the Royal Bank for £500, with no less than fourteen indorsements, and which had travelled over all India."

6. An organized system of exchanges has been long rigorously acted upon by the whole of the Scottish banks, under which all their mutual claims arising out of the possession of notes, drafts, or cheques, are settled at short intervals. Among provincial banks or branches, the exchange is adjusted weekly, and the balance liquidated by a draft payable on demand at Edinburgh, where the system is concentrated, and where all the banks are represented either by agents or their head offices. In Edinburgh, the exchanges are adjusted twice a-week, and the balances paid in Exchequer bills, 400 of which, each of the value of £1000, are kept by the banks in proportions corresponding to the estimated amount of their circulation, including that of the provincial establishments which they represent. These bills are applied to no other use, each bearing the distinguishing mark of "*Edinburgh Exchange Bill*," and any bank holding more than its quota is obliged to sell at par to another requiring bills; the price of such bills being paid by a draft on London, at five days' date, and the current interest, at Exchequer rate, settled in cash. All sums under £1000 are paid in Bank of England notes or gold. The balance receivable or payable by a bank depends upon the nature and amount of its business, and the exchange is said to be *favourable* when a balance is receivable, and unfavourable when the contrary. In general, the tendency of deposits, lodgements on current-accounts or for the purpose of remittance, and in short of all receipts, is to render the exchange favourable; and of loans, discounts (more particularly of bills not payable in the place), the payment of drafts, and of all advances, is to render it unfavourable; while the increase or decrease of these operations at particular times is productive of corresponding fluctuations.

The characteristics of the Scottish system of banking, it will be thus seen, are freedom, economy, and security. No monopoly is enjoyed by any one bank to the prejudice of others, and the money trade, like every other, is open to all who choose to engage in it. The currency employed is of the cheapest kind; and the joint effect of the deposit and cash-credit system is to prevent any part of the money capital of the country from remaining unproductive. The security of the whole is generally provided by numerous bodies of partners, large paid-up capital, and the system of exchanges, the practical operation of which is to drive from the field any establishment extending its business in a manner disproportioned to its resources. In the case of the celebrated Ayr Bank, of the East Lothian Bank, and of a few others, heavy losses were sustained by the partners; but the only banks of issue by which the public have sustained losses, since the introduction of banking into Scotland in 1695, are the Stirling Merchant, and Falkirk Union Banks, two small concerns, the aggregate amount of whose deficiencies did not exceed £36,344.

1. CHARTERED BANKS IN SCOTLAND.

Designation.	Instituted.	Partners.	Br.	Paid-up Capital.	Dividend.		Share Paid.	Price Aug. 1840.
					Rate	Payable.		
1. Bank of Scotland....	1695	672	31	£1,000,000	6	April and October..	£100	166 0 0
2. Royal Bank.........	1727	764	7	2,000,000	5½	January and July..	100	160 0 0
3. British Linen Co.....	1746	164	44	500,000	8	June and December	100	233 0 0
4. Commercial Bank....	1810	519	52	600,000	7	January and July..	100	178 0 0
5. National Bank	1825	1238	33	500,000	6	January and July..	10	14 19 0

2. UNCHARTERED BANKING COMPANIES IN SCOTLAND.

Designation.	Instituted.	Partners.	Br.	Designation.	Instituted.	Partners.	Br.
1. Aberdeen Bank..........	1767	189	11	13. Edinburgh & Leith Bank	1838	785	6
2. Aberdeen To. & Co. Bank	1825	491	10	14. Forbes, Sir W., & Co. Glasgow Union Bk. Co.	1830	508	20
3. Arbroath Bank..........	1825	80	1	15. Glasgow and Ship Bank..	1749	28	1
4. Ayr Bank...............	1773	11	6	16. Greenock Bank..........	1785	..	3
5. Ayrshire Banking Co....	1830	97	7	17. Leith Bank..............	1792	9	3
6. Caledonian Banking Co..	1838	1100	8	18. North of Scotland Bk. Co.	1836	1564	23
7. Central Bank of Scotland	1834	465	5	19. Paisley Commercial B. Co.	1839	344	1
8. City of Glasgow Bank....	1839	779	..	20. Perth Banking Company..	1766	182	3
9. Clydesdale Banking Co...	1837	818	3	21. Renfrewshire Bank. Co...	1802	..	5
10. Dundee Banking Co......	1763	52	1	22. Southern Bank of Scot...	1837	226	7
11. Dundee Union Bank......	1809	82	4	23. Western Bank of Scotland	1832	469	16
12. Eastern Bank of Scotland	1838	774	1				

The whole of these banks issue notes, and all are joint-stock companies, except Nos. 4, 15, 16, 17, 21. Two other joint-stock banks are at this date (August 1840) projected—the *Greenock Union Banking Company*, and the *Glasgow Joint-Stock Banking Company*. Messrs *A. Allan & Co.*, Edinburgh, are now the only private bankers who do not issue notes.

VII. BANKS IN IRELAND.—The introduction of banking into Ireland took place at a later period than in the two other parts of the kingdom; and its history may be termed a bad epitome of that of England, the same faults having been committed, and the evil arising from them having been much more conspicuous. The Bank of Ireland, which was incorporated in 1782, with a capital of £600,000 Irish, was invested with privileges similar to those of the Bank of England, and its charter contained unfortunately a clause that "no other bank issuing notes should consist of more than six partners." This restriction was inserted in order to give it a monopoly of the circulation; but the effect, as in England, has been to lead to the formation of country banks with inadequate resources. The evils resulting from such banks have been already described in the case of England; but in Ireland they were much more serious, from the less commercial habits of the people; and of fifty country banks established in 1804, no fewer than forty stopped payment: of these, ten failed in one year, namely, 1820, all in the southern part of the island.

The Bank of Ireland was placed in nearly the same relation to the State as the Bank of England. It advanced the greater part of its capital to government; and was intrusted with the management of the Irish department of the national debt. The exemption from paying in cash, granted to the latter establishment in 1797, was extended in the same year to the former, and led to a great increase in its circulation, which, from little more than £500,000 in 1796, was increased by 1815 to £3,000,000. A serious depreciation of the notes of the bank arose in consequence; and the silver currency of the country, though generally in a debased state, became more valuable in the form of bullion, and was all melted down. The community being, in consequence, exposed to the greatest inconvenience, the place of the coins was supplied in Dublin and other parts by counterfeits, and in several districts by a paper currency issued for sums gradually decreasing from 6s. to 6d., and even 3d. It was estimated that about 1804 there were dispersed throughout Ireland 295 issuers of this paper money, chiefly consisting of a motley body of shopkeepers, merchants, and petty dealers. The forgeries, frauds, and general inconvenience which resulted from this exceptionable currency led at length to its suppression by law; and the wants of the trade were supplied by the issue of stamped dollars by the Bank.

The charter of the Bank of Ireland was successively renewed, and its capital increased, until 1821, when, on the renewal of the charter for seventeen years (1 and 2 Geo. IV. c. 72), the capital was raised to £3,000,000 Irish, of which £2,850,000 Irish, or £2,630,769 : 4 : 8 sterling, were deposited with government,—namely, £1,615,384 : 12 : 4 at 4 per cent., and £1,015,384 : 12 : 4 at 5 per cent. interest. The yearly dividends of the Bank have been at no time less than 5½ per cent., excepting in 1783-4, when they were 5, and in 1792-3, when they were 2⅜ per cent. From 1800 to 1814, however, they were 7, 7¼, and 7½; from 1814 to 1829, excepting two years, they were 10 per cent.; and since 1829 the rates have been 9, 8½, and 8 per cent. Besides these dividends, the proprietors, at different times since 1793, have received bonuses amounting to no less than £665,000 Irish.

The only benefits ever granted by the Bank to the public, in consideration of its privileges, were a payment of £60,000 Irish in 1791, and, since 1808, the management of the Irish department of the national debt free of charge. The deposit with government of £2,850,000 Irish at the high rates of 4 and 5 per cent. cannot be viewed as any advantage to the latter. On the other hand, it ought to be remarked, that notwithstanding the vicious state of country banking in Ireland in consequence of the Bank's monopoly, no attempt was made by them to establish branches until 1825, when incited by the rivalry of the Provincial Bank. Since the expiry of the charter in 1838, special acts have been passed continuing it from year to year, until after the Report of the sitting Committee of the House of Commons, when the subject of its renewal will be discussed by Parliament, and when it is deemed probable that it will be placed nearly on a footing with those granted to the chartered companies in Scotland.

In the Appendix to the late Report (1840) of the Committee of the House of Commons on Banks of Issue, a weekly statement is given of the liabilities and assets of the Bank of Ireland from July 1832 to March 1840. The following is the account for the week ending 28th March 1840:—

BANK OF IRELAND, March 28, 1840.

Liabilities.			*Assets.*		
Circulation:			Securities:		
£5 notes and above	£1,816,700		Public		£2,778,300
Notes under £5	1,261,000		Private, viz.—		
		3,077,700	Notes and Bills disctd.	£2,463,500	
Deposits:			All other Private securities		
Public	£1,156,500			807,300	
Private & sundry balances	1,856,700				3,270,800
		3,013,200	Specie		1,130,500
		£6,090,900			£7,179,600

On the renewal of the Bank's charter in 1821, an arrangement was made by which joint-stock banks were allowed to be established at a distance of fifty Irish miles from Dublin; but this arrangement remained inoperative until several vexatious restrictions annexed to it were repealed by an act in 1824. This relief was followed by the institution of the Northern Banking Company at Belfast, the Provincial Bank, and several others.

The statutory regulations of the Irish joint-stock banks are principally embodied in the 6th Geo. IV. c. 42, the enactments of which are similar to those of the 6th Geo. IV. c. 46, already quoted in reference to England. In the former, however, the period within which the annual returns of managers, branches, and partners, are required to be made, extends from the 25th March in any year, to the same date in the year following.

The Bank of Ireland, and all the joint-stock banks, excepting the Hibernian and Royal Banks, issue notes for £1 and upwards; and their total circulation, according to the Bank Report for 1840, fluctuates from about £5,500,000 to £6,500,000. The Bank of Ireland, Hibernian Bank, and Royal Bank, receive deposits and discount bills; but the first does not allow interest, and not one of the three grants cash-credits. The other joint-stock banks conduct business on the Scottish system, or a modification of it. Bills on London are drawn at 21 days' date in exchange for cash, and letters of credit are granted for a premium of ¼ per cent.

BANKING COMPANIES in Ireland, with their advanced Capital, according to Returns to Parliament in 1837, and the Numbers of their Partners and Branches, according to Returns in 1839.

Designation.	Head Office.	Founded.	Partners.	Branches.	Advanced Capital.
					L. Sterling.
1. Bank of Ireland	Dublin	1782	..	22	2,769,230
2. Hibernian Joint-Stock Loan Co.	Dublin	1825	1063	0	250,000
3. Provincial Bank of Ireland	London	1825	728	34	491,780
4. Northern Banking Company	Belfast	1825	195	10	122,275
5. Belfast Banking Company	Belfast	1827	280	16	125,000
6. Agricultural & Commercial Bank	Dublin	1834	3673	28	352,789
7. National Bank of Ireland	London	1835	*463	15	411,837
8. Ulster Banking Company	Belfast	1836	679	8	204,325
9. Royal Bank of Ireland	Dublin	1836	324	0	199,275

The *Hibernian Joint-Stock Loan Company* was instituted chiefly by Roman Catholic gentlemen, in opposition to the Bank of Ireland in Dublin. It cannot, under the existing law, issue notes or establish branches. The *Royal Bank* is subject to the same restrictions.

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* Exclusive of branch partners.

The *Provincial Bank* is managed by a board in London, the shareholders being principally resident in England. It carries on business in most of the principal towns of Ireland. The management of each branch bank, subject to the control of the directors, is vested in an agent, with a committee of advice, consisting of two or more gentlemen residing in the district, each of whom must hold at least ten shares.

The *National Bank* consists also of a board in London, connected with branch or local banks throughout the principal towns in Ireland; but its principle of operation is different from that of the Provincial Bank. The capital of each branch is subscribed equally by the London company, and by a body of local shareholders, and profits are divided in the same proportion. The supreme control is vested in the London board; but it is provided "that each local bank shall be managed by a board of local directors, elected by the local shareholders, subject to the approbation of the directors in London."* The National Banks established on January 5, 1839, with the number of partners attached to each were as follows:—Limerick, 684; Clonmel, 646; Carrick-on-Suir, 571; Waterford, 618; Wexford and Enniscorthy, 589; Tipperary, 620; Tralee, 609; Cork, 530; Kilkenny, 546.

There are few private banks in Ireland.

The currency of Ireland was assimilated to that of Britain from and after January 5, 1826, by the act 6 Geo. IV. c. 79. The proportion of the late Irish currency to sterling was as 13 to 12, or £108 : 6 : 8 Irish = £100 sterling.

An account of the principles which regulate the value of bank paper, and a fuller explanation of the rules which govern its circulation in the United Kingdom, are given in the article MONEY, under which head are likewise considered the improvements or alterations in the system of the United Kingdom, suggested in the Reports made to the House of Commons by the Select Committee on Joint-stock Banks, and Banks of Issue, first appointed in 1836 on the motion of Mr Clay.

Principal Works on Banking, &c.:—Adam Smith's Wealth of Nations (Mr M'Culloch's edition); Thornton on the Paper Credit of Great Britain; Report of the Bullion Committee of the House of Commons, 1810; Blake on the Course of Exchange; Tooke on Prices; G. R. Porter's Progress of the Nation, sections III. and IV.; Sir H. Parnell's Historical Sketch of the Bank of England; Sir H. Parnell's Observations on Paper Money, Banking, &c.; J. W. Gilbart's Practical Treatise on Banking; J. W. Gilbart's History and Principles of Banking; Ricardo's Plan for the Establishment of a National Bank, 1824; Reports of the Parliamentary Committees on Scottish Banks, &c. in 1826; Report of the Committee of the House of Commons on the Charter of the Bank of England, 1832; Reports by the Committees of the House of Commons on Joint-Stock Banks, and Banks of Issue, in 1836, 1837, and 1840; and Pamphlets by Messrs Samuel Jones Loyd, J. Horsley Palmer, Wm. Clay, M. P., and R. Torrens.

BANKS (LOAN) are institutions formed for the purpose of advancing money upon articles of merchandise. The charters granted to the Bank of England, Bank of Scotland, and Royal Bank of Scotland, authorize them to advance money in this way; but in the present article it is intended to treat only of those loan banks which originated in motives of charity. Institutions of this kind are sometimes called *Montes Pietatis;* the term mont or mount being at an early period applied to any pecuniary fund. They were first established in the fifteenth century, for the purpose of checking the extortions of usurers by lending money gratuitously to the poor upon pledges: they were originally supported by voluntary contributions, but as these were found insufficient, it became necessary to charge interest for the loans. A bank of this kind was formed at Perugia in 1464; another at Rome in 1539; and one at Naples, which was considered the greatest in Europe, in the following year. The present Mont de Piété at Paris was established in 1777, and so largely has the public taken advantage of it, that it has been known to have in its possession forty casks filled with gold watches.

Banks of this kind are also called "Lombards," from the name of the original bankers or money-lenders. One of these was established in Russia in 1772, and the profit derived from it was given to the Foundling Hospital of St Petersburg.

In the United Kingdom, the business of making advances to the poor is committed to PAWNBROKERS and LOAN SOCIETIES.

BANKS FOR SAVINGS are institutions for the deposit of savings from the earnings of the poorer classes. They were established on a small scale in a few country parishes about the beginning of the present century; but it was not until after the formation of the Edinburgh Savings Bank by Mr Forbes (now Lord

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* This plan is understood to have been lately changed for that of the Provincial Bank, except at one or two of the branches.

Medwyn of the Court of Session) that they created much public interest. The practical operation of that bank in a large city, together with the writings of Mr Forbes, and Dr Duncan, minister of Ruthwell, led speedily to their establishment in various parts of England, and they now rank among the most important institutions of the kingdom.

Acts have been passed at various times for the encouragement and regulation of Savings Banks. The existing act is the 9 Geo. IV. c. 92, passed in 1828. The trustees of banks formed in terms of that statute are authorized to invest their deposits in the Banks of England or Ireland on receipts carrying interest at the rate of 2½d. per cent. per diem, or £3 : 16 : 0½ per cent. per annum; but it is provided, that "the interest payable to depositors shall not exceed the rate of 2¼d. per cent. per diem, or £3 : 8 : 5¼ per cent. per annum,—the difference being retained by the trustees to defray the expenses of the bank. It is also provided, that "All monies paid into the Banks of England or Ireland on the account of Savings Banks shall be invested in bank annuities or exchequer bills." The trustees are not allowed to receive deposits from any individual whose previous lodgements have amounted to £150; and when the balance due to any one depositor, including interest, amounts to £200, no farther interest is to be allowed. Charitable or provident institutions are permitted to deposit sums to the extent of £100 per annum, provided the amount shall not at any time exceed £300, exclusive of interest; and by the act 4 and 5 Wm. IV. c. 40, § 9, Friendly Societies are allowed to deposit to any extent. The lowest deposit received is generally one shilling, and by the act 3 Wm. IV. c. 14, § 29, individuals may not deposit more than £30 in any one year. A few days' previous notice is commonly required before deposits can be withdrawn.

The preceding acts were extended to Scotland in 1835, by the act 5 & 6 Wm. IV. c. 57.

On the 20th November 1837 there were in England 398 Savings Banks holding £16,177,699, belonging to 534,363 depositors, being on an average £30 for each depositor. At the same time there were in Wales twenty-three Savings Banks, holding £401,150, belonging to 13,557 depositors, being an average of £30 for each depositor; in Ireland, seventy-eight Savings Banks, holding £1,775,911, belonging to 63,298 depositors, being on an average £28 for each depositor; in Scotland, nine Savings Banks, holding £143,284, belonging to 13,352 depositors, being on an average £11 for each depositor; making in all for the United Kingdom 508 Savings Banks, holding £18,498,044, belonging to 624,560 depositors, being an average of about £30 for each depositor. Besides balances belonging to individual depositors, however, there were invested by 4909 Charitable Institutions, and 5187 Friendly Societies in England, £1,000,342; by 406 of such associations in Wales, £54,696; by 803 of such associations in Ireland, £53,315; by 201 of such associations in Scotland, £17,618. The total amount of money invested in Savings Banks on November 20, 1837, was therefore £19,624,015. On November 20, 1838, the number of individual depositors was 690,138, and the total amount deposited, including the lodgements of 6568 Charitable Institutions and 6530 Friendly Societies, was £21,393,212.

The comparatively small extent to which the public have availed themselves of Savings Banks in Scotland arises from the circumstance, that the ordinary banks seldom refuse to receive and allow interest on the deposit of a tradesman, though this should be considerably under £10, their general limit.

Savings Banks' Annuities.—The act 3 Wm. IV. c. 14, enables the industrious classes to purchase annuities, through the medium of Savings Banks, from the Commissioners for the reduction of the National Debt. These annuities (not under £4, nor in all exceeding £20) are payable for life, or for a number of years certain, and to commence either immediately, or at the end of any assigned period, as may be desired. Each description of annuity, when deferred, may be purchased either by annual payments (which will be received in monthly instalments or otherwise), or by one single payment; the annual payments to cease when the annuity becomes payable. And it is specially provided, that if there be default in making the annual payments, or if the person who has contracted for the annuity die before it becomes payable, the amount of all the payments, exclusive of interest, shall be returned. On the death of the nominee of any life annuity, a fourth part thereof, over and above arrears, is payable to his executors, or the party entitled thereto. These annuities are not transferable; but, on the purchaser's bankruptcy, they become the property of his creditors, from whom they will be repurchased by the Commissioners. The following is an abridgment of some of the tables of these annuities:—

TABLE
SHOWING THE VALUE OF AN IMMEDIATE LIFE ANNUITY OF £20.

Age.	£	s.	d.
15	377	15	6
20	362	12	2
25	354	15	3
30	343	18	10
35	328	19	11
40	310	7	9
41	306	5	10
42	301	18	6
43	297	7	10
44	292	12	6
45	287	12	6
46	282	7	10
47	276	16	0
48	271	0	4
49	265	1	4
50	259	0	4
55	230	1	5
60	202	14	4
65	171	14	2
70	142	2	6
75	114	4	7
80	81	14	10

TABLE
SHOWING THE SUM REQUIRED TO BE PAID AT THE TIME OF PURCHASE, OR IN YEARLY INSTALMENTS, FOR A LIFE ANNUITY OF £20, DEFERRED FOR THE FOLLOWING YEARS:—

Age.	10 Years.						15 Years.						20 Years.					
	In one sum.			Yearly.			In one sum.			Yearly.			In one sum.			Yearly.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
15	245	10	0	26	12	6	198	0	0	16	1	6	157	11	0	10	11	6
20	238	0	0	25	16	6	189	8	0	15	7	6	148	13	0	9	19	6
21	236	3	0	25	12	6	187	7	6	15	4	0	146	13	6	9	17	0
22	234	4	6	25	8	6	185	6	0	15	1	0	144	11	6	9	14	0
23	232	3	6	25	4	0	183	3	0	14	17	6	142	8	6	9	11	0
24	229	19	6	24	19	0	180	19	0	14	14	0	140	2	6	9	8	0
25	227	13	6	24	14	0	178	13	6	14	10	0	137	15	0	9	5	0
26	225	5	0	24	9	0	176	6	6	14	6	0	135	4	6	9	1	6
27	222	15	0	24	3	6	173	16	0	14	2	0	132	11	0	8	18	0
28	220	3	0	23	18	0	171	4	0	13	18	0	129	15	6	8	14	0
29	217	10	6	23	12	0	168	9	0	13	13	6	126	18	6	8	10	6
30	214	16	0	23	6	0	165	11	6	13	9	0	124	1	0	8	6	6
31	211	19	0	23	0	0	162	11	0	13	4	0	121	2	6	8	2	6
32	208	18	6	22	13	6	159	7	0	12	18	6	118	6	6	7	19	0
33	205	16	0	22	6	6	156	0	6	12	13	6	115	11	0	7	15	0
34	202	10	0	21	19	6	152	12	0	12	8	0	112	17	0	7	11	6
35	199	0	6	21	12	0	149	2	0	12	2	0	110	3	6	7	8	0
36	195	8	6	21	4	0	145	12	0	11	16	6	107	11	0	7	4	6
37	191	11	0	20	16	0	142	5	0	11	11	0	104	19	0	7	1	0
38	187	11	0	20	7	0	138	18	0	11	5	6	102	7	6	6	17	6
39	183	8	6	19	18	0	135	13	0	11	0	0	99	15	0	6	14	0
40	179	5	0	19	9	0	132	9	0	10	15	0	97	1	6	6	10	6

All transactions under this act are directed to be conducted through the medium of a Savings Bank; but it is made lawful for any persons, in a place where such an institution does not exist, to establish a society for carrying the provisions of the act into execution.

BANKRUPT AND BANKRUPTCY.—A bankrupt, in the modern acceptation of the term, is a person who, either from the want of sufficient property, or from the difficulty of presently converting what he possesses into money, is unable to meet those demands of his creditors which the law gives them the power of instantly enforcing, and who has committed some act indicative of the situation in which he is so placed. It is in the latter particular that a bankrupt differs from one who is insolvent. A man may, were his affairs examined, be found unable to pay his debts; but if his creditors are either ignorant of the circumstance, or knowing it, trust to the return of prosperity, no one is injured, no one's claim is resisted, and there is no necessity of applying the sweeping remedy of the Bankrupt Laws. But when by resisting or evading the demands of creditors, or by the other acts provided for in the bankrupt laws [ACTS OF BANKRUPTCY], a man has distinctly shown to the world that he has not wherewithal to meet the just demands on him, it has been deemed, in some cases, necessary for a special law to step in and lay its hand upon the property of every description belonging to the debtor, in order that particular creditors may not, through an expeditious adoption of the ordinary remedies of the law (suggested perhaps by superior means of knowing the bankrupt's circumstances), sweep away the whole in full payment of their debts, and thus acquire an advantage over less fortunate creditors beyond the just reward of their activity. To accomplish this end, a bankruptcy code appoints all the property of every description belonging to a debtor to be placed in the hands of trustees, to be by them converted into cash, and then to be distributed among the ordinary creditors in proportion to the amount of their respective debts. It is a principle of the commercial bankruptcy systems of the United Kingdom, that after a sufficient time has been allowed for all the resources of the bankrupt to be investigated, and his property realized for behoof of his creditors, if he has conducted himself with candour and integrity, he is protected from their farther prosecution, and left free to recommence the pursuit of wealth, untrammelled by any obligation to them previous to his bankruptcy.

IN ENGLAND, the laws of commercial bankruptcy were consolidated by statute 6 Geo. IV. c. 16, and were amended by the act 1 & 2 Wm. IV. c. 56, which created a new tribunal in bankruptcy. [BANKRUPTCY, COURT OF.]

Who may become Bankrupt.—By § 2 of the former statute, the commercial persons who may be subjected to the bankruptcy code are thus enumerated: "All bankers, brokers, and persons using the trade or profession of a scrivener, receiving other men's monies or estates into their trust or custody, and persons insuring ships or their freight, or other matters, against perils of the sea, warehousemen, wharfingers, packers, builders, carpenters, shipwrights, victuallers, keepers of inns, taverns, hotels, or coffee-houses, dyers, printers, bleachers, fullers, calenderers, cattle or sheep salesmen, and all persons using the trade of merchandise by way of bargaining, exchange, bartering, commission, consignment, or otherwise, in gross or by retail; and all persons who, either for themselves or as agents or factors for others, seek their living by buying and selling, or by buying and letting for hire, or by workmanship of goods or commodities, shall be deemed traders liable to become bankrupt: Provided that no farmer, grazier, common labourer, or workman for hire, receiver-general of the taxes, or member of, or subscriber to, any incorporated, commercial, or trading companies, established by charter or act of Parliament, shall be deemed as such a trader liable by virtue of this act to become bankrupt." There is here a distinction between two classes—those who belong to some specified commercial profession, and those who in general carry on any description of trade. It is ruled that the amount of the trade is not to be taken into consideration if the party show a disposition to contract with all comers; but occasional acts of buying and selling which spring incidentally from other pursuits, are not included,—as where a schoolmaster sells books to his own pupils, or a person who keeps hounds buys dead horses and sells the skins and bones, or one who has purchased more of an article than he finds use for sells the surplus. "Where the business of brick-making is carried on as a mode of enjoying the profits of a real estate, it will not make the party liable to the bankrupt law; but where it is carried on substantially and independently as trade, it will do so, and there is no difference whether the party is a termer or entitled to the freehold. The same general doctrine applies to the case of a person manufacturing alum, burning lime, or selling minerals from his own quarry" (*Henley*, 4 & 5). Where an executor merely disposes of his testator's stock, it does not bring him within the act, though he add ingredients to make it marketable; but it is otherwise if he increase the stock and continue to sell. It is not necessary that the trade be conducted *in* England, it is sufficient that the bankrupt trade *to* England. The persons excepted enjoy their privilege only in the capacity assigned to them in the act; farmers and graziers are liable if they trade. Buying and selling bank stock or government securities, is considered as no trading within the statute. "*Drawing and redrawing bills of exchange and promissory notes*, if there be a continuation of it with a view to gain a profit by the exchange, is a trading; but a person's merely drawing bills on his own account, and paying for their being discounted with interest, and borrowing accommodation bills in exchange for his own to the same amount, will not make a man a trader" (*Henley*, 4). [Before a trader can be declared a bankrupt, one of those events must have taken place which the law recognises as indicative of his inability to meet his engagements, or his design to evade them. These are termed Acts of Bankruptcy, and will be found enumerated under that head.]

Petition.—A trader who has committed an act of bankruptcy is made bankrupt on the petition of one or more creditors. If a single creditor or a company petition, the debt must amount to £100; if two creditors, to £150; and if three or more, to £200; and "every person who has given credit to any trader upon valuable consideration for any sum payable at a certain time, which time shall not have arrived when such trader committed an act of bankruptcy, may so petition and join in petitioning as aforesaid, whether he shall have any security in writing or otherwise, for such sum or not" (6 Geo. IV. c. 16, § 15). "The debt must be due both in law and equity; due to the petitioning creditor alone, unless he be a co-assignee or co-partner; it may be on account, if the creditor swear to a sufficient balance, or a sum awarded, notwithstanding a bill filed to set aside the award, or an attorney's bill though not signed or delivered; or the debt of a surety. But not a mere security for a contingent demand, nor costs recoverable only by attachment, nor damages for a tort before judgment, nor a debt for which the debtor is in execution, nor a cross-acceptance, unless the creditor have paid his own; nor can the husband petition alone on a debt due to his wife *dum sola*, unless it be a bill or note. Of course, the debt must not be bad for illegality. It was once held, that a debt barred by the statute of limitations is sufficient, unless perhaps where the objection is taken by the bankrupt himself, yet the *proof* of such a debt is disallowed. A debt will be sufficient, though the debtor have been insolvent, and it was included in his schedule; or though a security of a higher nature have been taken for it since the bankruptcy. A debt due to an infant will not be sufficient" (*Smith's Mercantile L.* 493, 494). A debt barred by the statute of limitations will not support a petition, nor will a debt on a transaction declared null by the act 57 Geo. III. c. 99, § 3, which prohibits spiritual persons from embarking in trade. By § 18 of the 6 Geo. IV., if the petitioning creditor's debt is found insufficient, the court may order the bankruptcy to be proceeded in on the petition of any other creditor who has proved a sufficient debt, provided it be not anterior to that of the petitioning creditor.

Docket, Fiat, and Adjudication.—Before petitioning, a creditor ought to institute a search at the bankrupt office to ascertain if a docket has been struck. If none has been struck, the creditor, if he reside in London or its vicinity, appears before a Master in Chancery, or if in the country, before a Master-extraordinary in Chancery, and makes affidavit of the truth and reality of the debt, and of belief that the debtor is a bankrupt. [AFFIDAVIT.] It has been a rule that a country bankruptcy cannot be executed within forty miles from London, and must be executed within ten miles of the place to which it is issued. The creditor then delivers his affidavit at the bankruptcy office, accompanied by a bond to the extent of £200, in which he undertakes to prove his debt and the bankruptcy of the debtor, in case of the proceedings being contested. An entry is made in an official book, termed "the Docket Book," on the delivery of the bond and affidavit, and the petitioner is then said to have "struck a docket" against the bankrupt. Before the act 1 & 2 Wm. IV. c. 56, the Lord Chancellor used to issue a commission, empowering certain commissioners to dispose of the person and property of the bankrupt for the benefit of the creditors. A simple fiat is by that statute (§ 12) substituted for the commission. It may be issued by the Lord Chancellor, the Master of the Rolls, the Vice-chancellor, and "each of the Masters of the Court of Chancery, acting under any appointment by the Lord Chancellor to be given for that purpose." The fiat authorizes the petitioner to prosecute his complaint in the Court of Bankruptcy, or before commissioners in the country. It must be subsequent to the act of bankruptcy; but it will be sufficient if it have been issued at a later hour of the same day. When the bankruptcy is a country one, the commissioners qualify by taking the oath. The commissioners of the Court of Bankruptcy take a general oath on entering on their office. The petitioning creditor must attend before the commissioners and prove his debt, and the trading and bankruptcy of the debtor [Commissioners]; and the commissioners, after full inquiry, adjudge the party bankrupt. If the trader intend to dispute the adjudication, he may present a petition to the court of review within two calendar months if he be within the United Kingdom, within three if he be elsewhere in Europe, and within a year (or a shorter period, at the discretion of the court) if he be out of Europe. The bankrupt may have an issue for trying the question by jury, on finding security for costs, if the court require him to do so (1 & 2 Wm. IV. c. 56, § 17). [Bankruptcy, Court of.] At the adjudication, the commissioners issue the warrant of seizure, which empowers a messenger to search for and take possession of the property of the bankrupt. The commissioners then proceed to make inquiry into the bankrupt's dealings, by examining those who have been connected with him in business, &c. [Commissioners.] Meanwhile, in town bankruptcies the estate vests in the official assignee, and in country bankruptcies in the provisional assignees, if it has been thought necessary to make such appointment. [Assignees.]

Relation.—The procedure retroacts by "relation" to the date of the act of bankruptcy. In virtue of this principle, all transactions by which the bankrupt conveyed or alienated his property in the interval were formerly void. The rule was gradually relaxed. By the 6 Geo. IV., payments were protected, and other transactions if completed two calendar months before the date of the commission or fiat (§§ 81, 82). By a late statute, 2 & 3 Vict. c. 29, it is enacted that "all contracts, dealings, and transactions, by and with any bankrupt, really and *bona fide* made and entered into before the date and issuing of the *fiat* against him, and all executions and attachments against the lands and tenements, or goods and chattels of such bankrupt *bona fide* executed or levied before the date and issuing of the fiat, shall be deemed to be valid, notwithstanding any prior act of bankruptcy by such bankrupt committed, provided the person or persons so dealing with such bankrupt, or at whose suit, or on whose account such execution or attachment shall have issued, had not at the time of such contract, dealing, or transaction, or at the time of executing or levying such execution or attachment, notice of any prior act of bankruptcy by him committed: Provided also, that nothing herein contained shall be deemed or taken to give validity to any payment made by any bankrupt, being a fraudulent preference of any creditor or creditors of such bankrupt, or to any execution founded on a judgment on a warrant of attorney, or cognovit, given by any bankrupt by way of such fraudulent preference."

The commissioner who adjudicates, appoints two or more meetings of creditors for the bankrupt to surrender and conform, at the first of which the chosen assignees are elected (1 & 2 Wm. IV. § 20). A considerable portion of the subject of bankruptcy is so intimately connected with the powers and duties of the assignees, that reference may here be made to that head for the greater part of the remainder of the subject. The claims of the creditors will be found under the head of Proof. Up to the meeting for the choice of assignees, the petitioning creditor prosecutes the bankruptcy at his own cost, the commissioners then authorize the assignees to reimburse him from the first realized funds. When the adjudication has been pronounced, notice is given by the commissioners in the London Gazette, of the adjudication, and of the two meetings.

The Bankrupt.—The bankrupt must surrender his property and all documents connected with it, and conform to the provisions of the bankrupt law. A summons to surrender must be left at his residence, and he is liable to transportation or imprisonment and hard labour if he disobey it, or do not make a full surrender and disclosure. The surrender must be made before three o'clock of the forty-second day after notice, but the court may enlarge the time (6 Geo. IV. §§ 112, 113). The following provision is made by 6 Geo. IV. § 116, for the bankrupt's co-operation with the assignees, "every such bankrupt, not in prison or custody, shall at all times after such surrender, attend such assignees upon every reasonable notice in writing for that purpose, given by them to him, or left at his house, and shall assist such assignees in making out the accounts of his estate; and such bankrupt, after he shall have surrendered, may, at all seasonable times before the expiration of the said forty-two days, or such farther time as shall be allowed to him to finish his examination, inspect his books, papers, and writings, in the presence of his assignees, or any person appointed by them, and bring with him each time any two persons to assist him; and every such bankrupt, after he shall have obtained his certificate, shall, upon demand in writing given to him or left at his usual place of abode, attend the assignees, to settle any accounts between his estate and any debtor to, or creditor thereof, or attend any court of record to give evidence touching the same, or do any act necessary for getting in the said estate, for which attendance he shall be paid five shillings per day by the assignees out of his estate." The provision is enforced by imprisonment. The bankrupt is free from arrest in coming to surrender, and after surrender during the forty-two days, and such further time as may be allowed for examination, provided he was not in custody at the time of surrender. If he be arrested, he can demand his discharge on producing the commissioners' summons (§ 117). At the last examination the commissioners may adjourn the examination *sine die*, and they are entitled to indorse on the summons a protection to the bankrupt from imprisonment, for a period not exceeding three months (§ 118). The commissioners and assignees are empowered to make the bankrupt an allowance from time to time from the estate, until he have passed his last examination (§ 114). If the bankrupt have duly surrendered and conformed, he will, on obtaining his certificate "be discharged from all debts due by him when he became bankrupt, and from all claims and demands hereby made proveable" (§ 121). The certificate, if granted before six calendar months from the bankrupt's last examination, must be signed by four-fifths in number and value of creditors to the amount of £20; after the six months it may be granted by three-fifths in number and value, or nine-tenths in number. To render the certificate a discharge, it must be accompanied by an attestation from the commissioners of the bankrupt's surrender and conformity, and the bankrupt must swear that the certificate was obtained without fraud (§ 122). The certificate must be "allowed" in the court of review, and it may there be opposed by any creditor. In the following cases, the certificate is, by § 130, void:—"If such bankrupt shall have lost, by any sort of gaming or wagering, in one day £20, or within one year next preceding his bankruptcy £200; or if he shall, within one year next preceding his bankruptcy, have lost £200 by any contract for the purchase or sale of any government or other stock, where such contract was not to be performed within one week after the contract, or where the stock bought or sold was not actually transferred or delivered in pursuance of such contract; or shall, after an act of bankruptcy committed or in contemplation of bankruptcy, have destroyed, altered, mutilated, or falsified, or caused to be destroyed, altered, mutilated, or falsified, any of his books, papers, writings, or securities, or made or been privy to the making of any false or fraudulent entries in any book of account or other document, with intent to defraud his creditors, or shall have concealed property to the value of £10 or upwards; or if any person having proved a false debt under the commission, such bankrupt being privy thereto, or afterwards knowing the same, shall not have disclosed the same to his assignees within one month after such knowledge." A certificate in a second bankruptcy, or in favour of a bankrupt who has at some previous period been discharged on an insolvent act, or who has compounded, is restricted in its operation (unless the estate produce fifteen shillings in the pound) to the protection of his person from arrestment and imprisonment, his future estate and effects (tools of trade, necessary household furniture, and wearing apparel excepted) remaining vested in his assignees (6 Geo. IV. § 127). After the bankrupt has obtained his certificate, the regular allowance is awarded him. If the net produce amount to 10s. per pound, he is to receive 5 per cent., provided that do not exceed £400. If it amount to 12s. 6d. per pound, his allowance is 7½ per cent., provided it do not exceed £500, and if the produce amount to 15s. or upwards per pound, it is to he 10 per cent., provided it do not exceed £600. If the estate do not pay 10s. per pound, the bankrupt is only to be allowed so much as the assignees and commissioners think fit, not exceeding 3 per cent., and limited in amount to £300 (§ 128).

Dividends.—The distribution of the funds realized among the creditors is thus provided for. At the meeting for the last examination, the commissioners appoint a public meeting to be held not less than four months from the issuing of the fiat, and within six months after the examination, giving twenty-one days' notice in the Gazette. At the meeting the assignees give in an account of their transactions on oath, and the commissioners audit the account and inquire whether any balance in the assignees' hands ought to be retained (§ 106). Not sooner than four, or later than twelve months from the issuing of the fiat, the commissioners appoint a meeting with similar notice for declaring the first dividend out of such part of the net prodnce as they may think fit. At this meeting all creditors who have not previously proved may prove. The assignees make the dividend in pursuance of the order, without a Deed of Division, and take a receipt from each creditor in a book preserved for the purpose (§ 107). If the estate is not exhausted by the first dividend, a meeting for a second is called in the same manner within eighteen months from the issuing of the fiat. All creditors who have not proved may prove at this meeting, and all who have not partaken of the former dividend are paid according to the amount of that dividend before a general distribution is made, "and such second dividend shall be final, unless any action at law or suit in equity be depending, or any part of the estate be standing out not sold or disposed of, or unless some other estate or effects of the bankrupt shall afterwards come to the assignees, in which case they shall, as soon as may be, convert such estate and effects into money, and within two calendar months after the same shall be so converted, divide the same in manner aforesaid" (§ 109). Assignees having at their disposal unclaimed dividends to the amount of £50, must within two months after expiry of a year from the above declaration of a dividend, pay the dividends, or file a certificate of them in the bankruptcy office, with the creditors' names, amounts, &c., otherwise they are chargeable with 5 per cent. interest, and such farther sum as the commissioners may think fit, not exceeding 20 per cent. Dividends which have lain unclaimed for three years may be divided among the other creditors (§ 110). By 1 & 2 Wm. IV. § 22, official assignees must keep all monies lodged in bank, subject to the order of the court. [Assignees.]

Rescinding and Annulling.—The Lord Chancellor was, by the former law, empowered to issue a "supersedeas" to supersede a commission; he may now by 1 & 2 Wm. IV. § 19, rescind or annul a fiat. The power is in the general case discretionary. It will be exercised in the case of fraud, or in the absence of any of the requisites, or if the bankruptcy is not proceeded with. When a fiat is rescinded, the acts done under it become void. It is the invariable practice to rescind or supersede when the consent of all the creditors who have proved is obtained. It is imperative on the court to annul when it is certified that the proper number of creditors have agreed to a composition. [Composition Contract.] (*Henley's B. L. Smith's Mercantile L.* p. 465-610.) [Assignees. Bankruptcy Court. Commissioners. Composition Contract. Proof.]

In Ireland the process of bankruptcy has, by the late act 6 & 7 Wm IV. c. 14, as amended by 7 Wm. IV. and 1 Vict. c. 48, and by 2 & 3 Vict. c 86, been in almost every respect assimilated to the English system, which may be applied to Ireland, keeping in view these small distinctions. There are two commissioners of bankruptcy in Ireland, a first and second, one of whom is empowered to act in each instance by a commission under the great seal. There are no official assignees, so that the rules as to country bankruptcies in England apply. In the case of persons not liable to be made bankrupts, after the words "member of or subscriber to any incorporated commercial or trading companies established by charter," come the words "under or registered in pursuance of act of Parliament" (§ 18). In the Irish act, the expression "supersede" is continued.

In Scotland, the process by which the property of a trader is realized and divided among his creditors is termed Sequestration (which see); the word bankruptcy has a wider meaning in law, and is applied to all descriptions of persons who are placed in circumstances that publicly indicate their inability to meet their engagements. They are distinguished from those who may be insolvent, but whose situation is not made known to the world through the public acts of their creditors, by the term "notour," or notorious, bankrupt. By the Scottish act 1696, c. 5, any debtor who, being under diligence by horning and caption, is imprisoned, or seeks the sanctuary of Holyrood House in Edinburgh, or defends himself by force, or flees, or absconds, and is afterwards found to have been insolvent at the time, is declared a notour bankrupt. "Insolvency," says Professor Bell, "is not made a presumption by the statute, but few cases occur where a proof of insolvency will be required in addition to the concurrence of the other requisites. It is not necessary, as may be imagined from the words of the act, to institute a separate action for ascertaining the insolvency. The point is tried in the course of the reduction of a preference, or in judging of the petition for sequestration; and the judgment on the insolvency is combined with the sentence on the whole question before the court" (*Commentaries*, ii. 168). By later statutes, additions were made to the acts which constitute bankruptcy. They are thus consolidated in the

54 Geo. III. c. 137, § 1. "If any person, subject to the laws of Scotland, shall happen to be forth of that part of the territory of the United Kingdom, or not liable to be imprisoned by being in the sanctuary, or by reason of privilege or personal protection, a charge of horning executed against him, together with either an execution of arrestment of any of his effects not loosed or discharged within fifteen days after the date thereof, or an execution of poinding of any of his moveables, or a decree of adjudication of any part of his heritable estate, for payment or security of debt, shall, when joined with insolvency, be held a sufficient proof of legal bankruptcy, and equivalent to the description of notour bankruptcy, given in the act of the Parliament of Scotland before mentioned, made in the year 1696; and it is hereby declared, that such insolvent debtor shall, from and after the period when both the charge of horning against the person, and one or other of the said diligences of arrestment (not loosed or discharged as aforesaid) or poinding have been executed, or decree of adjudication obtained, be holden and deemed a legal or notour bankrupt, and subject to the regulations of the said act in the year 1696, as hereby extended and explained; and every person, whether he be out of Scotland or not, whose estate has been or shall be sequestrated under the authority of any of the acts before recited, or of the present act, shall in like manner be holden and deemed a notour bankrupt in all questions upon the act 1696, from and after the date of the first deliverance on the petition to the Court of Session for awarding the sequestration." The latter part of this enactment is made applicable to sequestrations under the late act (2 & 3 Vict. c. 41, § 25). Horning and caption is a form of execution against the person, now in comparative disuse, since a more brief method of execution was provided by the act 1 & 2 Vict. c. 114, a warrant to imprison in terms of which, has the same effect in rendering bankrupt, as the superseded form (§ 35). By this act the power of imprisoning, and consequently of producing notour bankruptcy is extended to the sheriffs of counties. Magistrates of royal burghs have long possessed the power of imprisonment, but it is exercised in a form which does not carry bankruptcy with the writ on which it proceeds. The effect of the bankruptcy is to render all deeds conferring preferences on creditors, whether by conveyance or security, null, if granted after the bankruptcy, or within sixty days before it. The challenge is competent only to a creditor. A payment in money is not challengeable, but the indorsation of bills and drafts is struck at unless they be simply given as cash; a real transaction is not challengeable, and so a bill drawn or indorsed for value immediately received is valid, and "payments in the ordinary course of trade, though made by means of bills or drafts, are to be sustained, unless the transaction be manifestly fraudulent, and intended as an evasion of the act" (*Bell*, ii. 218). It is a farther effect of bankruptcy, that by the act 1621, c. 18, deeds gratuitous, or without proper consideration to "conjunct or confident persons,"—that is, to near relations, or persons with whom the granter is nearly connected in business or otherwise,—granted after the existence of lawful debts, are null, and may be challenged by the creditors affected; any creditor may benefit by the provision who can show that debts existed before the granting of the deed, unless it be shown on the other side that at the time of making the deed, the granter possessed surplus funds capable of meeting his debts. A deed granted in virtue of a previous obligation is not gratuitous, and does not come within the statute (*Bell's Commentaries*, ii. 160-242. *Burton's Manual of the Law of Scotland*, 601-606). [Sequestration. Trustee. Personal Protection.]

BANKRUPTCY, COURT OF, in England. Previously to the passing of 1 & 2 Wm. IV. c. 56, the sole jurisdiction in bankruptcy was vested in the Lord Chancellor, who exercised it by issuing a special commission in each individual case. By that statute, a court was appointed, having one chief and three puisne judges, six commissioners, two registrars, with deputy-registrars in number not exceeding eight, and official assignees not exceeding thirty in number (§§ 1, 9, & 22). The judges, or any three of them, constitute a court of review, which must always sit in public, "save and except as may be otherwise directed by this act, or by the rules and regulations to be made in pursuance hereof" (§ 2). Questions are brought before the court of review by petition, motion, or special case, according to rules which the judges are empowered to make from time to time, with consent of the Lord Chancellor (§§ 3 & 11). The commissioners are formed into two subdivision courts, each consisting of three; and any one or more of them possesses the powers formerly exercised by commissioners of bankruptcy appointed by special commission (§§ 6 & 7). [Commissioners.] A commissioner may adjourn an examination, to be taken either before a subdivision court or the court of review. He may adjourn a Proof of Debt [Proof] to be heard before a subdivision court, which "finally and without appeal, except upon matter of law or equity, or of the refusal or the admission of evidence, shall determine upon such proof of debt." If parties consent, the validity of a debt may be tried by jury before the chief, or one or more of the other judges, on an issue prepared under the direction of the commissioner or the subdivision court. If only one party apply, the granting of the issue is at the discretion of the commissioner or subdivision court, subject to appeal to the court of review (§ 30). The decision of a commissioner or subdivision court, on any matter of law or evidence, or on the refusal or admission of evidence, may be appealed to the court of review, and thence to the Lord Chancellor (§ 31). If the court of review determine in any appeal touching any decision in matter of law, upon the whole merit of any proof of debt, the order is final as to the proof, unless an appeal to the Lord Chancellor be lodged within a month. His decision in such case is final, but if the appeal is on admission or refusal of evidence, it is remitted to the commissioner or subdivision court (§ 32). If the Lord Chancellor deem any matter of law or equity brought before him by appeal from the court of review, to be of sufficient difficulty or importance to require the decision of the House of Lords, or if both parties to any question before the court of review desire it to be determined in the first instance by that House, and not by the Lord Chancellor, his lordship or the court of review may direct the whole facts to be stated in the form of a petition of appeal to the House of Lords (§ 37). References or adjournments by a commissioner must be to the subdivision court to which he belongs, unless in the case of sickness of a member of the court, or for other good cause (§ 6). Appeals to the Lord Chancellor are heard by him only, and not by any other judge of the Court of Chancery (§ 3). The court of review has the power of deciding on petitions for reversal of the adjudication against the bankrupt [BANKRUPTCY], and may direct any issue as to a fact affecting the validity of the adjudication, to be tried by jury. If the verdict is not set aside on application to the court of review within a month after the trial, or if the adjudication be not set aside by the court of review, the adjudication or verdict is conclusive evidence that the party was or was not a bankrupt at the date of the adjudication—an appeal lies to the Chancellor in matters of law or equity, or the refusal or admission of evidence only (§ 17).

IN SCOTLAND and IRELAND there are no separate tribunals for administering the bankrupt law. In the former country this duty is performed by the Court of Session, in the latter by the Lord Chancellor, under whom there are two official commissioners (6 & 7 Wm. IV. c. 14, 7 Wm. IV. and 1 Vict. c. 48).

BARILE, an Italian and Sicilian liquid measure, the contents of which vary in different places from about 7 to 16 Imp. gallons.

BARILLA (Fr. *Barille.* Ger. *Barilla.* It. *Barriglia.* Rus. *Socianka.* Sp. *Barrilla*), an impure carbonate of soda, obtained by lixiviating the ashes of seaweeds. It is imported into the United Kingdom in considerable quantities from Spain, the Canary Islands, and Sicily, and in smaller parcels from the East Indies. The finest is brought from Alicant, near which it is prepared from the *Salsola sativa* or *Barilla*, and the *Salier*, two plants which are extensively cultivated for that purpose in Valencia and Murcia. It is brought to us in hard porous masses. The best quality is of a blueish-gray colour, while that which is made from other plants is of a colour approaching black, and of greater specific gravity than the former. The value of barilla depends upon its purity. It usually contains from 16 to 24 per cent. of its weight of pure carbonate of soda, and occasionally 30 per cent. It is consumed in the arts,—particularly in the manufacture of soap and glass, and in bleaching; but it is now much less used than formerly, on account of the cheapness with which soda is obtained from common salt. About 70,000 cwts. are at present entered annually for home consumption, which, notwithstanding a great reduction of duty, is less than one-third of the quantity formerly required. It is chiefly used in Ireland.

A drawback is allowed on the barilla used in bleaching linen (4 & 5 Wm. IV. c. 89, § 14).

British Barilla, or *Kelp*, is a still more impure alkali, formerly made in large quantities in the Hebrides, Orkney, and Shetland, by burning sea-wrack (mostly the *Fucus vesiculosus*). It contains only from 3 to 8 per cent. of pure carbonate of soda. The kelp manufacture has been comparatively trifling since the abolition of the duties on salt, and the reduction of those on barilla.

BARK, the rind or covering of a tree. A variety of barks occur in commerce, but only that of the oak will be noticed in this place. Some others, as cinchona or Peruvian bark, cork, cinnamon, cassia, and quercitron, will be described under their respective heads.

Oak Bark (Ger. *Eichenrinde, Lohe.* Du. *Run, Runne.* Fr. *Tan Brut, Ecorce de Chêne.* It. *Scorza di Quercia, Corteccia della Quercia.* Sp. *Corteza de Encina.* Por. *Casca do Carvalho.* Rus. *Dubowui Kord*) is the chief substance used for tanning leather. Its quality varies according to the age of the tree, and the season when it is cut; and Sir H. Davy discovered that tannin is more abundant in the bark of young than of old ones. It is likewise ascertained, that bark taken in the spring has 4½ times the quantity of tannin, in a given weight, compared with what it would have if taken in winter. Of substances used for tanning, Sir Humphry states, that 8½ lbs. of oak bark are nearly equal to 21 of common willow bark, 18 of elm bark, 11 of the bark of the Spanish chesnut, 7½ of the bark of the Leicester willow, 3 of sumach, 2¼ of galls, and 1 of catechu, with respect to the tannin contained in them.

In addition to the oak bark of British growth, nearly 40,000 tons are annually imported, more than one-half of which is brought from the Netherlands, the remainder chiefly from Italy and other parts in the Mediterranean.

BARLEY (Fr. *Orge*. Ger. *Gerste*. It. *Orzo*. Sp. *Cebada*), a well-known species of corn (*Hordeum*), of which the varieties are distinguished either from the number of rows of grains in the ears, or from the time of sowing them, into winter barley and spring barley. In this country, it is commonly sown in April, and from two to three bushels of seed are used for an acre. The produce varies greatly with seasons, culture, and soil. The more early it can be sown, the produce in grain is the surer, though the bulk in straw is less. 36 bushels per acre is generally held to be a medium crop, and 40 bushels a good crop. The medium weight of the common, or two-rowed barley (*H. distichon*), is about 52 lbs. the bushel. The principal consumption of barley is for malting. In the state termed *pot* or *pearl* barley (having the external coat of the seed rubbed off), it is employed largely in soups and cooling drinks; and the flour is used in many places for bread. In the south of Europe, it is consumed as food for horses. *Bigg* or *Bere*, an inferior variety of six-rowed barley, is cultivated in the north of Scotland, and other late places, on account of its ripening well when sown in spring; but its grains do not weigh so heavy, in proportion to their bulk, as the two-rowed kind. Barley is cultivated in a greater variety of climates than any of the other bread corns. In the United Kingdom, the best is raised in Essex, Norfolk, and Suffolk, where large quantities are produced and malted for the London market. [CORN TRADE.]

BARM. [YEAST.]

BARQUE. [SHIP.]

BARRATRY is any fraudulent or other unlawful act committed by the master or mariners of a ship, without consent of the owner, and tending to his injury;—"as by running away with the ship, wilfully carrying her out of the course of the voyage prescribed by the owners, sinking, or deserting her, embezzling the cargo, smuggling, or any other offence, whereby the ship or cargo may be subjected to arrest, detention, loss, or forfeiture" (*Marshall*, 519). In other countries it comprehends those faults of ignorance, unskilfulness, or rashness, by which loss may be occasioned; but in Britain it is limited to intentional offences against the owners, and it has been decided, that an act done with the privity of the owners, though without that of the proprietor of the cargo, who was the person insured, is not barratry (*I. T. R.* 323). If the shipmaster be the owner, he cannot be guilty of barratry. It is not essential that the act be done for the profit of the master or the mariners, and so it is barratry to sail out of port in breach of embargo, in consequence of which the owners sustain a loss in seamen's wages and provisions by detention (Robertson *v.* Ewer, *I. T. R.* 127). It does not affect the act that it was designed to benefit the owner. "With respect to the owner of the ship or goods," says Lord Ellenborough, "whose interest is to be protected by the policy, it can make no difference in the reason of the thing, whether the prejudice he suffers be owing to an act of the master, induced by motives of advantage to himself, malice to the owner, or a disregard to those laws which it was the master's duty to obey, and which (or it would not be barratry) his owners relied upon his observing." And it was accordingly decided, that where a master had general instructions to make the best purchases with despatch, this would not warrant him in going into an enemy's settlement to trade (which was permitted by the enemy), though his cargo could be more speedily and cheaply completed there; but such act, in consequence of which the ship was seized and confiscated, was barratrous (Earle *v.* Roucroft, 1806, 8 *East.* 125). A general freighter is held owner for the time, and barratry may be committed against him, though with the sanction of the shipowner. On the same principle, the owner cannot recover as for barratry for what is done by order of the charterer, and it was held, that if the owner of a ship let to freight takes the command of her, and willingly runs her ashore, this is barratry against the freighter (Soares *v.* Thornton, 7 *Taunt.* 627). Most descriptions of barratry are punished as crimes. By 33 Geo. III. c. 66, § 8, the captain of any merchantman under convoy, wilfully disobeying the signals or instructions of the commander of the convoy, or deserting without notice or leave, is liable to imprisonment not exceeding a year, or to a penalty not exceeding £500. By 7 & 8 Geo. IV. c. 30, for consolidating the laws of England as to malicious injuries to property; maliciously setting fire to, or destroying any vessel, whether complete or unfinished, and maliciously setting fire to a vessel to prejudice the owner, or the owner of goods on board, or an underwriter, are respectively, by § 9, made punishable (in England) with death. Barratry is one of the losses covered by insurance, and the owner may thus protect himself against the act of the master and sailors appointed by himself. "If the captain be the insured, no agreement on the part of the insurers can make them liable for barratry committed by himself; but they may be liable in such case for the barratry of the sailors in which he has no part" (*Marshall*, 521). It is the duty of the owner to prevent as far as he may the misconduct of the master; and if the former appear to have acted with gross negligence, the underwriter is not liable. Nor will this last be liable for loss which is the undoubted consequence of the barratry, unless it happen within the time prescribed by the policy for the duration of the risk. (*Park on Insurance*, 137-158. *Marshall on Insurance*, 518-538.)

BARREL, a round wooden vessel formed so as to be stopped close; also a measure of capacity. The beer-barrel equal 36 imperial gallons. The barrel of flour is 196 lbs. avoirdupois. In Ireland the barrel of wheat, pease, beans, and rye, equal 20 stones each of 14 lbs.; the barrel of barley, bere, and rapeseed, equal 16 stones; the barrel of oats is generally 14 stones; the barrel of malt equal 12 stones.

BARREL-BULK, in shipping, is a measure of capacity for freight, equal 5 cubic feet; and 8 barrel-bulk, or 40 cubic feet, equal 1 ton measurement.

BARRIQUE, a French provincial liquid measure, equal in Bordeaux to about 50½ imperial gallons; in Nantes, 52¾; in Rochelle, 38⅓; in Rouen, 43; in Montpellier, for wine, 5½, and for oil, 7⅓ imperial gallons nearly.

BARTER is the exchange of one species of merchandise for another without reference to a money standard of value. Cases of pure barter are now of rare occurrence.

BARTER in *Commercial Arithmetic* is an application of the rule of Proportion to the exchange of one commodity, of which both the rate and quantity are fixed, for another, of which either the rate or the quantity are alone fixed. As the value of the goods exchanged are equal, it is obvious that the product of the quantities multiplied into their respective rates will be also equal. Hence the following

Rule: Multiply the given quantity and rate of the one commodity, and the product, divided by the rate of the other commodity, gives the quantity sought; or, divided by the quantity, gives the rate.

BARWOOD, a red dye-wood produced in Angola and other places in Africa. Only a small quantity is imported into the United Kingdom.

BARYTES, a ponderous earthy mineral, which is found both massive and crystallized; it is of various colours; and is both transparent and opaque. Sp. gr. 4·5. It is a very widely diffused substance. Chief localities, Dufton in Cumberland, Bohemia, &c. The purely white varieties are ground, and used as a pigment, either alone or mixed with white lead; but it is otherwise of little value. (*Phillips' Geology and Mineralogy*.)

BASKETS (Fr. *Corbeilles*. Ger. *Körbe*. It. *Paniere*. Por. & Sp. *Canastas*) are well known articles, made of willows, twigs, rushes, or splinters, or some other slender bodies interwoven. In England, the osier willow (*Viminalis salix*) is recognised as a most useful material for basketwork of all descriptions. The finer kinds of baskets are formed of the twigs of another species of willow; but what is called wickerwork is always made of osiers.

BASSA, a liquid measure of Verona nearly equal to an imperial gallon.

BAST, the inner bark of the lime tree, is a material largely used in Russia for matting and cordage.

BATMAN, an oriental weight. [MAUND.]

BATTA, a term used in India to denote a per centage, or allowance. Thus the Sicca rupee is said to bear a *batta* of 16 per cent. against the current rupee, as 100 Sicca rupees = 116 current rupees. Batta also denotes an allowance made to the East India Company's military officers in addition to their pay.

BATTENS, pieces of fir or pine timber used for floors, and as a ground for laths. They are always at least 6 feet long, and generally not exceeding 7 inches broad, and 2¾ inches in thickness when imported. The best are from Christiania; the worst from America.

BATTEN-ENDS are pieces under 6 feet in length.

BATZE, a small base silver coin in Switzerland and some parts of Germany, worth about three halfpence sterling.

BAVARIA, a kingdom in the S.W. of Germany, and, next to Austria and Prussia, the most important of the German States. Area, about 30,000 British square miles. Population, 4,315,469. It is subdivided into eight provinces. Capital, Munich, pop. 75,000. The government is a limited monarchy, with chambers of councillors and deputies, regulated by a deed of constitution of May 26, 1818.

Bavaria is composed of two territories, which are separated from each other by the interposition of the Baden and Hesse Darmstadt possessions. The larger, called the *Territory of the Danube and Maine*, extends from lat. 47° 19′ to 50° 41′ N., and from long. 8° 51′ to 13° 44′ E., and comprehends seven of the eight provinces. This country is mountainous and woody towards the south;

rising in the direction of the Alps, and containing a number of lakes and marshes, the grounds adjoining which are only now being brought under tillage. To the northward are rich and extensive plains until we reach the Danube, beyond which it is again mountainous and woody. The division called the *Territory of the Rhine*, is a small but densely inhabited country, extending from lat. 48° 57′ to 49° 50′ N., and from long. 7° 6′ to 8° 31′ E. Bavaria is essentially an agricultural country, and its soil, though indifferently cultivated, is in general fertile. Wheat, rye, barley, and oats, are the chief objects of culture; next to which are the vine and hop plant: considerable attention is likewise given to flax, hemp, fruit, liquorice, and madder; and of late, the rearing of the silk-worm has been attempted with partial success. The chief mineral productions are iron, salt, and coal; but quicksilver, gold, silver, cobalt, and some other metals, are likewise found. Manufacturing industry is mostly diffused over a number of small dealers. The principal article is coarse linen; the others are woollens, worsted hose, cottons, hardware, arms, beer, toys, leather, paper, glass, porcelain, and straw-platting. A favourable impulse has lately been given to manufactures by the institution of polytechnic societies and mechanic schools.

The roads of Bavaria extend upwards of 5500 miles; but they are generally bad; and there are few complete canals of any great magnitude. The improvement of the means of communication has of late, however, begun to attract attention. A canal on a large scale is now in progress for joining the Danube and the Rhine, by connecting Dietfurth on the Altmuhl, an affluent of the former, with Bamberg on the Maine, a distance of about 112 British miles: it is estimated to cost nearly £900,000. In 1835, a railroad with steam-carriages was established between Nuremberg and Furth; and in 1838, a regular steam-communication was established between Ratisbon and Linz in Austria, which in 1839 was extended to Donauwerth and Ulm.

The external commerce of Bavaria is chiefly conducted by the Danube in one direction, and the Rhine in the other. Exports:—Grain, salt, timber, potashes, fruit, liquorice-root, seed, hops, cattle, sheep, swine, fish, flax, yarn, coarse linens, glass, leather, Nuremberg wares, beer, &c., amounting annually to nearly 1,500,000 florins, more than one-half of which consists of manufactured goods. Imports:—Wine, cotton, coffee, sugar, rice, tobacco, drugs, fish, copper, oil, hides and skins, hemp and flax, silks, woollens, lead, furs, honey, and cheese. Salt is prohibited. Bavaria, for an inland country, is favourably situated for commerce; and it is the channel of a considerable transit trade betwixt the other German States and Switzerland, Austria, and Italy, to which the Prussian Commercial Union, of which Bavaria is a member, has given a considerable impulse. The duties on goods imported are in general those of the Union.

The chief commercial and manufacturing cities, besides Munich, are Augsburg, pop. 34,000; Nuremberg, pop. 40,400; and Ratisbon, pop. 22,000. Augsburg formerly occupied the place now held by Frankfort as the chief money-market of Central Germany; and banking and exchange operations are still one of its principal sources of wealth: it also carries on an extensive transit trade, and is celebrated as a wine depôt.

MEASURES, WEIGHTS, MONEY, FINANCES, &c.

Measures and Weights.—In Munich, the ell = 32¾ Imp. inch.; the wine eimer of 60 maas = 8·12 Imp. galls.; the scheffel of 6 metzen or 12 viertels = 9·98 Imp. bushels; and the centner or quintal of 5 stones or 100 pounds = 56 kilogrammes or 123½ lbs. avoird. Gold and silver are weighed by the Cologne mark, here reckoned at 3609¾ troy grains.

These measures and weights have lately been rendered general throughout Bavaria. In the former system of Augsburg, the traders' or long ell = 24 Imp. inches; the fustian or short ell = 23·32 Imp. inches; the muid of 48 maas = 15·08 Imp. galls.: the schaff of 8 metzen = 5·65 Imp. bushels; 100 lbs. heavy weight = 108·30 lbs. avoird.; and 100 lbs. light weight = 104·23 lbs. avoird. The Augsburg mark of 16 loths or 64 quintins = 3643 troy grains.

Money.—The common integer of account is the Rhenish or Bavarian florin, which is divided into 60 kreutzers, each of 4 pfennings. This florin, being coined at the rate of 24½ from the Cologne mark of fine silver, is equal to 1s. 8d. sterling.

In Augsburg, the florin of account and exchange (divided as above) is valued according to the convention rate, as in Austria, making it worth about 2s. 0½d., and the par of exchange with London, 9 fl. 50 kr. per £1. But in exchanges with Hamburg and Amsterdam the nominal florin, *giro-geld* is valued 27 per cent. higher, or at 2s. 7d. sterling. Retail transactions are conducted in Rhenish money, as above. The usance for bills on Augsburg is 15 days' sight; half usance 8 days. Bill transactions are settled weekly on Wednesday, and those which fall due on that day are not payable till the Wednesday following. Bills have thus from 1 to 8 days' grace; but those drawn *a vista* (at sight), must be paid within 24 hours after being presented.

Banks.—Augsburg, as already noticed, is one of the principal places of Germany for banking and exchange operations. At Munich, a banking company has been established which issues notes, discounts bills, and lends money on mortgage; it is sanctioned by government; but the latter is not responsible for its engagements.

Finances.—The public revenue is about 30,000,000 fl., and the expenditure nearly the same; besides which, the county rates for special provincial disbursements amount to upwards of 4,500,000 fl. The national debt is nearly 130,000,000 fl.

BAY, a celebrated tree (*Laurus nobilis*), a native of Barbary, of the south of Europe, and of Asia. It attains a height of 20 or 30 feet. The leaves are smooth, evergreen, lanceolate, and wavy at the margin; and afford, when bruised or burnt, a grateful aroma, which occasions their employment for culinary purposes. But the part chiefly valued is the fruit or berry, which is small, ovate, dark purple-coloured, aromatic, and bitter. It has long been used in medicine as a stimulant and carminative. The husks of the berries contain a great quantity of volatile oil; and the kernels furnish by expression a fat greenish oil, which is much employed in embrocations. Bay-berries and oil are imported into the United Kingdom from Italy and Spain.

BAZAAR (in Persian a *market*), a term used in Persia, Turkey, Egypt, and India to distinguish those parts of towns which are exclusively appropriated to trade. The principle of the oriental bazaar is association for facility of reference; all the shops of a city are placed together; and the different trades and occupations are severally collected in different parts of the bazaar, instead of being indiscriminately mingled as in our streets. Thus the saddlers are found to occupy one passage, the pipemakers another, and so on. The great bazaars consist of a connected series of these passages, or lanes, vaulted with high brick roofs, surmounted by domes which admit a subdued daylight; and those of a superior description are sometimes decorated with paintings. The passages are composed of a series of recesses or stalls, the floor of which is raised from two to three feet above the ground. These recesses, which are entirely open in front, are scarcely more than closets; but in the more respectable parts there is generally a door in the back-wall which leads to another apartment that answers the purpose of a store-room. The front part is the shop, on the floor of which the merchant sits with his goods so placed that he has seldom occasion to rise, which, if he is a Turk, he rarely does without manifest reluctance. Long bargaining is common, and an apparent indifference is exhibited both by buyer and seller; the latter, as he sits smoking his pipe, being indeed the very personification of luxurious repose. Not only trades, but handicraft employments are carried on in the bazaars. The stocks of the individual dealers are seldom of much value, but an imposing effect is produced by the exhibition of the whole in a connected form, whence arises the splendid appearance of the oriental bazaars. Business commences and terminates with daylight, and none of the shopkeepers or artisans reside in them. Wholesale dealers have no open shops in the bazaars, but they have warehouses in them, or in their vicinity.

In this country, especially in London, the term bazaar is commonly understood to mean an assemblage of shops or stalls under cover, but these are less properly bazaars than Paternoster Row with its books, Monmouth Street with its shoes, and Holywell Street with its old clothes.

BEACON. [BUOY. LIGHTHOUSE.]

BEACONAGE, a charge for the use and maintenance of a buoy, lighthouse, or other beacon stationed for the use of navigators.

BDELLIUM, a gum resin of doubtful origin, produced in Persia and India. It resembles myrrh, for which it is sometimes substituted. It is now disused in Britain, but is to be found intermixed with gum-arabic.

BEADS, small globes or balls made of glass, ebony, pearl, or other materials, and used as necklaces. They are also employed by Roman Catholics for the purpose of counting a series of prayers called the *Rosary*.

BEANS (Fr. *Fèves*. Ger. *Bohnen*. It. *Fave*. Por. *Favas*. Rus. *Boobü*. Sp. *Habas*), the grain of a leguminous plant (*Faba vulgaris*), of which there are two general classes,—those which are cultivated in gardens, termed garden or white beans, and those which are cultivated in the fields, termed field or gray beans. Of these last, the principal are the horse bean and the tick; the former is the more hardy, the latter is generally of better quality, and more productive.

The bean, though an exhausting crop, is regarded as well suited to prepare the land for wheat or barley. It is sown in February or March; and except where the dibbling process is resorted to, about 4 bushels of seed are required to the acre; 40 bushels to the acre are regarded as a great crop; 30 bushels are a full and satisfactory one; and probably the average produce of the kingdom does not amount to 24 (*Low's Agriculture*). The field bean is chiefly applied to the feeding of horses, hogs, and other domestic animals. [CORN TRADE.]

BEAVER. [FUR TRADE.]

BÊCHE DE MER, called also tripang, or sea-cucumber, is a very peculiar kind of sea-slug (*Holothurion*), which, after being gutted, pressed, dried in the sun, and smoked, is regarded by the Chinese as a luxury, much in the same way in which we regard caviare. It is carried to China from almost every island of the Eastern Archipelago, from Australia, and of late from Mauritius and Ceylon. The value, as may be seen by the Canton Price-current, varies according to quality, from 6 dollars up to 50 per pecul; and the natives alone for the most part are judges of its worth. The principal importation into China is by the junks, and the quantity is so considerable that the fishery of it, especially on the coast of New Holland where it abounds, might probably be entered into with advantage by Europeans. (*Edinburgh Cabinet Library, No. XX. China.*)

BEECH, a beautiful and valuable tree (*Fagus sylvatica*), indigenous to most parts of Europe. It thrives best in rich soils and sheltered situations. The wood is of close texture, though not so strong as the grained timbers against a cross strain. When exposed to alternate drought and moisture soon decays, but lasts long when kept constantly wet. Beech is used for machinery, furniture-work, screws for workmen's benches, presses, stocks and handles of tools; also for keels of ships, boats, and for planking in parts kept constantly under water. It is, however, little used in building, and though easily turned, it is not adapted for hollow vessels, as it is apt to split when quickly dried after being wet. Beech is also liable to be attacked by worms, so that it is not extensively employed. The small wood makes good charcoal, and the mast or fruit furnishes food for swine.

Beech-nut Oil, a fat or greasy oil, resembling that from olives, obtained from the decorticated nuts of the beech tree. These yield, by pressure, about 15 per cent. of oil, and a larger quantity when aided by heat; the remaining cake is reckoned better food for cattle than common oil-cake.

BEEF (Fr. *Bœuf*. Ger. *Rindfleisch*), the flesh of the ox, forms, in a salted state, a considerable article of exportation, especially from Ireland. In 1838 there were exported of the produce of the United Kingdom 42,161 barrels of beef and pork of the declared value of £148,403; about two-thirds of which were sent to the West Indies; and the remainder chiefly to Australia, British America, Mauritius, and India. In the same year 13,108 cwts. of foreign salted beef were imported; only a small part of which, however, was entered for home consumption.

The importation of fresh, or corned, or slightly salted beef for home consumption is prohibited by 3 & 4 Wm. IV. c. 52, § 58-60; and, by 3 & 4 Wm IV. c. 57, § 43, foreign beef exported from the warehouse must be taken on board as merchandise only, and not consumed as stores.

A barrel of Irish mess beef contains 25 pieces, each of 8 lbs., or 200 lbs.; a tierce, 38 pieces, or 304 lbs.; a firkin, 25 pieces, each of 4 lbs., or 100 lbs.

BEEF-WOOD, the produce of a species of *Casuaracea*, which grows in New South Wales, is a hard, close-grained, reddish wood, variegated with dark and white streaks. It is imported in logs of about 9 feet long by 13 inches broad; and is principally used in forming borders to work in which the larger woods are employed.

BEER (Fr. *Bière*. Ger. *Bier*) is a fermented liquor, made from the malt of barley, and flavoured with hops. It may be called the wine of barley. A variety of kinds are made; those in use at present being distinguished by the names of Ale, Porter or Strong Beer, Table Beer, and Small Beer, which differ little except in strength, and in the mode of preparing the malt from which they are manufactured.

Ale is brewed from malt which has been dried by the application of only a slight heat, and is of a more sirupy consistence and sweeter taste than porter. The best kinds made in this country are the Scotch and Burton ales. *Scotch ale* is distinguished for paleness of colour and mildness of flavour; the taste of the hop never predominates; and it is perhaps more near to the French pale wines than any of the other ales that are brewed in this country: it is like them too the result of a lengthened fermentation. The general mode of charge is by the hogshead (= 1½ barrels or 54 Imp. galls.), for which from £3 to £8 are paid according to quality. This ale is made chiefly in Edinburgh, also at Alloa and Prestonpans. *Burton ale*, brewed at the place of that name in Staffordshire, is prepared from the palest malt and hops, as, if it be not as pale as a straw it will not pass with connoisseurs. It is also distinguished for strength, flavour, and sweetness. It is usually charged by the gallon, as the sizes of the casks differ. Besides the Burton ales, those of Nottingham and Birmingham are sent to the London market.

Porter, or strong beer, is a potent fine liquor, transparent, and of a beautiful brownish colour. It is brewed in the same way as ale, with this difference, that in making malt for porter, a much higher temperature is applied, by which it is slightly burned, so that the wort got from it has a dark colour, and a peculiar bitter taste. Other substances, however, besides malt and hops, are known to be sometimes used to improve its flavour and appearance, though the use of such substances is prohibited. Different kinds of porter are known in trade by particular names and marks. *Mild beer* is beer newly brewed; *entire* consists chiefly of that made expressly for the purpose of keeping; *brown stout* is a fine strong kind of porter: the degrees of strength are in some cases marked with an X (single X), XX (double X), and XXX (treble X). For a fuller account of the different kinds of porter, see "*Art of Brewing*," *Library of Useful Knowledge*. The price of a hogshead varies, according to quality, from about £2, 12s. to £5, 2s.; namely, X, or stout, £2, 12s.; XX, or brown stout, £3, 12s.; XXX, or double brown stout, £4, 4s.; imperial, £5, 2s. London is the chief seat of the manufacture, but Dublin porter is also celebrated. Of late years a general preference is given to mild ale instead of porter; and several of the most eminent London brewers have had to change their manufacture to suit the altered taste of their customers.

Small beer and *Table beer* are weaker liquors, made either by mixing a large proportion of water with the malt, or by mashing what is left after the porter or ale wort is drawn off, with a fresh quantity of water. The names of *spruce beer, ginger beer*, &c. are given to other inferior beverages, consisting of a saccharine liquor, partially fermented, and flavoured with peculiar substances.

The excise duties formerly levied on beer were abolished from and after October 10, 1830, by 1 Wm. IV. c. 51; but a considerable revenue is still derived from the licenses payable for the privilege of manufacturing and selling it, and from the duty on malt.

The Manufacture of Beer is regulated by different statutes. Brewers are required to take out a license from the excise, and to "enter" their premises under a penalty of £200, and forfeiture of the mash-tun and materials. No security is required for the license. Brewers are prohibited from having on their premises any raw or unmalted grain or corn, under forfeiture of the same, and a penalty of £200 (1 Wm. IV. c. 51). The adulteration of beer is also prohibited; and any brewer or dealer in beer having in his possession, making, using, or mixing with any worts or beer, any other articles than malt and hops, shall forfeit such articles and the vessels in which they are contained, and pay £200 for each offence. Druggists or others delivering to any brewer, or dealer, knowingly, any colouring other than unground brown malt, are subject to a penalty of £500 (56 Geo. III. c. 58).

The license duty imposed on brewers shall be paid according to the quantity of malt used by them, reckoning a barrel of beer (36 Imp. galls.) for every two bushels of malt (6 Geo. IV. c. 81; 1 Wm. IV. c. 51).

The Sale of Beer in England is principally regulated by the acts 11 Geo. IV. and 1 Wm. IV. c. 64, 4 & 5 Wm. IV. c. 85, and 3 & 4 Vict. c. 61, the chief enactments of which are the following:—

A party requiring a license for selling beer, ale, and porter, by retail, must produce to the officer of excise a certificate from an overseer of his locality, to the effect, that he is an actual resident in the house for which he claims, and stating the amount in which he is rated to the poor (3 & 4 Vict. c. 61, § 2); must enter into a bond to the commissioners of excise, with one surety of £20, or with two of £10 each, for the payment of any penalty or sum of money, not exceeding the amount of such £20 or £10 respectively, which shall be incurred for any offence against this act, by the party to whom such license shall be granted; and no person licensed to sell beer by retail, or not being a householder paying the poor-rates, shall be surety in any such bond (1 Wm. IV. c. 64, §§ 4, 5). By the late act, licensed retailers must enter all their premises with the excise, under the arrangements of the general excise act [EXCISE] (3 & 4 Vict. c. 61, § 9).

Every person applying for a license to sell beer to be drunk on the premises, to deposit with the commissioners a certificate of good character, signed by six rated inhabitants of the parish, none of whom shall be maltsters, common brewers, or persons licensed to sell spirituous liquors or beer or cider by retail; but if there are not ten rated inhabitants in the place, the certificate of the majority of them to be sufficient. Such certificate to be signed by overseer as to rating, under a penalty for refusal of £5 (4 & 5 Wm. IV. c. 85, §§ 2, 3).

Duties on beer licenses under 1 Wm. IV. c. 64 repealed, and in lieu thereof there shall be payable for any license to sell beer off the premises, £1, 1s., and on the premises, £3, 3s. (Ibid. § 13). Penalty for making or using false certificates, £50; and licenses obtained on false certificates to be void. Licenses under the said act not to authorize persons to hold licenses for sale of wine. Penalty on persons licensed under the acts permitting wine or spirits to be consumed on the premises £50, besides excise penalties and forfeiture of the spirits, &c. and of the license. Penalty on unlicensed persons selling beer and cider by retail, £5, besides excise penalties. There is a similar penalty against persons allowing beer to be drunk on the premises, when the license is for beer drunk off the premises (3 & 4 Vict. c. 61, §§ 6, 13).

The name and surname of the party licensed to be painted on a board over the door "in letters three inches at least in length, in white upon a black ground, or in black upon a white ground," together with the words "licensed to sell beer by retail," "not to be drunk upon the premises," or, "to be drunk on the premises" (1 Wm. IV. c. 64, § 6; and 4 & 5 Wm. IV. c. 85, § 18).

Certificate not to be required for houses in London or Westminster, or any parish or place within the bills of mortality, nor any city or town corporate, nor within the distance of one mile from the polling place of any town returning a member to Parliament, so that the population according to the last parliamentary census shall exceed 5000 (4 & 5 Wm. IV. c. 85, § 21). By the last act, no premises can be licensed unless they be rated at £15, if in London, or within a mile from the polling place of a town having 10,000 inhabitants; or at £11 where the population is above 2000; or at £8 if situated elsewhere (3 & 4 Vict. c. 61, § 1).

ACCOUNT of the Number of Licenses granted for the Manufacture and Sale of Beer in the United Kingdom, together with the amount of Duty thereon, in the Year ended January 5, 1838.

	England.		Scotland.		Ireland.	
	No.	Duty.	No.	Duty.	No.	Duty.
Brewers of strong beer not exceeding 20 barrels.....	8,998	£4,499	62	£31	29	£14
.... exceeding 20 and not exceeding 50..	8,520	8,520	24	24	1	1
.... 50 .... 100..	10,445	15,667	28	42	11	16
.... 100 .... 1000..	18,306	36,612	211	422	55	110
.... 1000 barrels...............	1,597	13,825	114	956	146	1549
Brewers of table beer.............................	14	13	90	63	..	..
Retail brewers under 5 Geo. IV. c. 54..............	18	94	20	105	..	..
Sellers of strong beer only, not being brewers.......	979	3,084	23	72	60	189
Beer retailers whose premises are rated under £20 per annum....................................	39,926	41,922	16,293	17,106	19,175	20,134
.... £20 or upwards......................	15,824	49,846	790	2,488	1,623	5,112
Retailers of beer, cider, or perry, under 1 Wm. IV. c. 64, and 4 & 5 Wm. IV. c. 85, namely........						
To be drunk on the premises....................	39,902	125,691	..	..	..	..
Not to be drunk on the premises.................	5,291	5,556	..	..	..	..

The Exportation of Beer is regulated by 1 Wm. IV. c. 51, § 9-14. A drawback of 5s. is payable for every barrel of 36 imperial gallons exported to foreign parts. But before any debenture shall be paid for such drawback, the exporter, or his principal clerk or manager, shall make oath, before the proper officer of excise, that such beer or ale was exported as merchandise, and no part thereof for the ship's use; and that, according to the best of his knowledge and belief, the same has been brewed wholly from malt which has paid the duty of 2s. 7d. a bushel. He shall also specify in such oath the time when, and the place where, and the brewer, being an entered and licensed brewer for sale, by whom such beer or ale was brewed, and that the quantity of malt used in brewing was not less than 2 imperial bushels for every 36 gallons of such beer or ale. Penalty for false statements, £200, and the debenture is void.

The art of preparing ale and beer for warm climates has now attained a high degree of excellence; but the quantity exported is inconsiderable, when compared with what is consumed at home. It is principally sent to the East and West Indies, Australia, United States, and Brazil. In 1836, 15,148 tuns (each of 216 gallons) were exported, of the declared value of £270,915; in 1837, 15,588 tuns, declared value, £273,122; in 1838, 18,327 tuns, declared value, £317,359.

The import duties on beer and ale are prohibitory, and none is imported.

Historical Notice.—The use of a fermented liquor from barley is of high antiquity, not only in the north of Europe, but even in Spain and Egypt. Ale was a favourite beverage of the ancient Scandinavians, and it was an article of their belief that drinking large draughts of it formed one of the chief felicities of heroes in the Hall of Odin. In England, ale appears from a very early period to have been regarded as one of the necessaries of life; but down to the era of the Reformation, the use of wine was also very general;—it being both extensively manufactured from vines reared in the southern counties, and imported on a considerable scale from the Rhine and other parts. The decay of the ecclesiastical gardens at that time, however, and the greater encouragement then given to the growth of grain and the culture of hops, gradually led to the more extended use of ale, which, from the period just stated, may be regarded as peculiarly the national beverage of England.

In ancient times, ale was subject to a variety of statutory regulations in reference to its price and wholesomeness; but it was not made an exciseable commodity until 1643. The beer duties varied at different periods; and at length were abolished in Ireland in 1795, and in Britain in 1830. The rates levied betwixt 1802 and 1830, were 10s. per barrel (old measure) on strong beer, and 2s. per barrel on table beer, which yielded in the year 1829, in England, £3,126,568; in Scotland, £79,414; in all, £3,205,982. The quantity brewed during the same year in Britain, amounted to 7,735,598 barrels, of which 6,060,247 barrels were strong beer. No record exists of the quantity made since the abolition of the duty; but there can be no doubt that it has very considerably increased.

In the same year (1830) in which the duties on ale and beer were repealed in Britain, by 1 Wm. IV. c. 51, another act of even greater importance, not only to the traders in ale and beer, but to the community generally, received the sanction of the legislature. This was the act 1 Wm. IV. c. 64, already mentioned. Under its provisions, which came into operation on the 10th October 1830, any person could obtain a license to sell ale, beer, and porter by retail in England; their privilege being derived from an excise license costing two guineas, and renewable annually. Previously, the Justices of the Peace were alone empowered to grant licenses for the sale of malt liquor. The acts of 1834 and 1840 (4 & 5 Wm. IV. c. 85; and 3 & 4 Vict. c. 61) introduced some new regulations which ought perhaps to have been considered necessary from the first opening of a new trade so liable to be misconducted as that of the sale of fermented liquors. The act of 1834 also introduced a distinction in England between those who sold beer, &c. for consumption on their premises, and those who sold it only to be consumed elsewhere. Since the passing of the acts of 1830 and 1834, the number of licensed retailers has increased in every part of England; but it has now probably reached a point at which it will remain nearly stationary.

In Ireland and Scotland, the fermented liquor most commonly used is whisky, and the quantity of beer consumed is inconsiderable, compared with England. [Malt. Hops.]

BEET, a plant, one species of which (*Beta vulgaris*) is distinguished by its large succulent root. Of this species the chief varieties are,—red beet, which has been long cultivated in our gardens for the table; white beet, extensively used in France and other parts of the Continent, for the manufacture of sugar [Sugar]; and field beet [Mangel Wurzel] used as food for cattle. Another species of beet producing succulent leaves only (*B. hortensis*), forms one of the principal culinary vegetables of the peasantry of France, Germany, and Switzerland.

BELGIUM, a kingdom situated in the W. of Europe, betwixt lat. 49° 27′ and 51° 31′ N., and long. 2° 37′ and 6° E.; and which, prior to the revolution of 1830, formed with Holland the United Kingdom of the Netherlands. It is bounded N. by Holland, E. by Prussia, S. by France, and W. by the North Sea. Area, excluding the portions of Luxemburg and Limburg, now subject to Holland, 11,351 British square miles. Provinces and population in 1839: Antwerp, 365,173; Brabant, 604,950; W. Flanders, 636,890; E. Flanders, 769,407; Hainault, 643,410; Liege, 400,780; Limburg, 151,617; Luxemburg, 167,885; Namur, 232,825; total, 3,972,937; of which nearly 300,000 are Germans and Dutch, the rest Belgians, that is Walloons and Flemings, belonging to the Greco-Latin stock and speaking a French dialect. Capital, Brussels; pop. in 1839, 104,713. Government, a constitutional monarchy, with a senate and house of representatives; the members of both chambers being elected by those citizens who pay not less than 20 florins (33s. 3d. sterling) annually of direct taxes.

Belgium is in general a level country, except in the provinces of Liege and Namur, where the surface becomes irregular and in some parts hilly. The soil of the flat country is in most parts light and sandy; but is rendered exceedingly fertile by the constant application of manure, to obtain which the attention of the cultivator is especially directed to the rearing of cattle. The climate resembles that of the S. of England, but more variable; and the common objects of culture are wheat, rye, barley, oats, buckwheat, potatoes, turnips, hemp, flax, beet, hops, and chicory, with artificial grasses; a variety of fruits are also grown, and some tobacco. About 9-11ths of the country are under cultivation, and of the remainder, the greater part is occupied by forests, towns, roads, canals, and railways, which cannot be deemed unproductive. The most highly cultivated provinces are those of the north and west, which in their flatness, fertility, dikes, and canals, closely resemble Holland; and are so thickly inhabited as to present the appearance of one continuous village.

The mineral productions are numerous and abundant, particularly in the S. and E. portions of the kingdom, comprehending Hainault, Namur, Luxemburg, and Liege; and the working of mines constitutes a valuable branch of the national industry. Of the mineral products, the first in point of importance is coal, the extraction of which employed in 1836, 31,190 men; and there were produced 22,000,000 hectolitres, worth 32,000,000 francs. The three great centres of the coal mines are Mons, Charleroy, and Liege. Iron mines are numerous, especially in the district between the Sambre and the Meuse; and in 1836, the quantity of prepared ore worked up was 456,000 tons, corresponding to double that quantity taken from the mines. Lead is found in Liege, in Namur, and in Luxemburg, especially at Longrilly; copper in Hainault and Liege; zinc in Namur and Hainault; besides which the mineral products of the S. and E. provinces embrace manganese, calamine, sulphur, and alum, also various kinds of stone, slate, marble, and clay fitted for the manufacture of porcelain.

In manufactures, Belgium formerly excelled all other states, but they gradually declined while the country was under the dominion of Spain, and became comparatively inconsiderable. Since the revolution of 1830, however, a new impulse has been communicated to all branches of industry. One of the most important of the manufactures is that of woollen cloths (particularly black cloth), the chief seats of which are at Verviers, Liege, and Dalhem; carpets are made at Tournay; linens at Ghent, St Nicolas, Termonde, Courtray, Ninove, and other places. The cotton manufacture, in which there is invested in fixed capital in buildings and machinery about 60,000,000 francs, employs upwards of 120,000 hands; Ghent, St Nicolas, Antwerp, and Mechlin contain the principal factories. The breeding of the silk worm was introduced in 1826, and the silk manufacture is rising into importance in Antwerp, Siene, and Uccle near Brussels. The lace of Brussels and Mechlin has long been celebrated; and ribands of every kind are made in large quantities at Antwerp, Tournay, and Ypres. The smelting and manufacture of iron, copper, and tin is carried on extensively from the abundance of these metals and of coal, and charcoal from the forests; the principal groups of forges are between the Meuse and the Sambre, at Charleroy, and on the banks of the Meuse, extending from its entrance into Belgium to the limits of Namur and Liege, at which last place the coke furnaces, which have been doubled in number since 1837, are of greater dimensions and power than any in Europe: the iron manufactures comprehend steam-engines, cannons, and firearms, all made on a great scale in Liege; and cutlery and iron utensils in various localities. The chief other manufactures are those of hosiery, employing about 50,000 persons, mostly in the arrondissement of Tournay; porcelain at Sept-Fontaines, Brussels, Ardennes, and Tournay; glass at Namur, Liege, Val-St-Lambert, and Charleroy; beet-root sugar, and refining at Ghent; besides beer, leather, salt, paper, hats, and a great variety of other articles. Much of the rapid progress observable in almost every branch of industry of late years is due to the facilities and encouragements afforded by the government, but individual enterprise has been also conspicuous. Amidst many instances of this kind, there is one in particular so essentially national to Belgium, so identified with its prosperity, and of a celebrity so truly European, that it is impossible to leave it unnoticed. We allude to Mr John Cockerill of Liege, one of the most distinguished persons who has yet appeared in the manufacturing world. He is concerned in upwards of 50 manufacturing establishments; Germany, France, and Poland possess some of them; but the greatest number are situated in Belgium. Of these the most remarkable for its intrinsic qualities of vastness and solidity, as well from its being the seat of government, so to call it, of Mr Cockerill's scattered empire of mechanical enterprise, is that of Seraing, on the banks of the Meuse, near Liege, where no fewer than 3700 men are employed in coal-mines, iron-works, blast furnaces, and in the manufacture of steam-engines and other machines.

The internal commerce of Belgium is facilitated by magnificent rivers, particularly the Meuse and the Scheldt, the latter being navigable as far as Cambray in France. There are also numerous canals. We can only mention the great Northern Canal, from Neuss on the Rhine (in Prussia) by Venloo on the Meuse to Antwerp, and with which communicate, by means of the Scheldt, the Lievre and Bruges canals; the Ostend and Dunkirk canals, reaching the sea at different points; the Brussels canal; and the Louvain canal. The railways, likewise, owing to the flatness of the country, have been introduced with a success unknown even in Britain. According to a law passed in 1834, it was provided that a system of railroad should be established in the kingdom which, having Mechlin for its centre, should lead towards the east by Louvain, Liege, and Verviers, to the Prussian frontier; towards the north to Antwerp; towards the west by Termonde, Ghent, and Bruges, to Ostend; and towards the south, over Brussels, and through Hainault, to the French frontier: the costs of the execution, and the superintendence, to devolve upon the government; and the tariff for the use of the railroads to be fixed yearly by a law. The works began immediately after the publication of the law, and have since been forwarded with great success. In 1839, they comprised an extent of 150 British miles; while those which are decided upon towards France will embrace a further distance of 90 miles. So persevering besides is the activity of the government in the improvement of the country that large sums are also voted for new roads and canals, although Belgium is already so rich in the facilities of communication. Of the public works, not a few, such as the railroads for uniting the Scheldt and the sea with the Rhine, and the constructions towards the German frontier, have been projected with the view of rendering comparatively unproductive to Holland the rivers which had secured to her the commercial monopoly of the Rhenish provinces, and the transit trade to Germany.

The external commerce of the kingdom suffered from the revolution of 1830, but it has again revived, and now shows a progressive improvement, corresponding with that which has occurred in the other branches of industry. The exports chiefly consist of bark from the trees of the Belgian forests, of which nearly 350,000 cwts. are annually exported to Great Britain alone, seeds, especially clover, coal, of which immense quantities are annually sent to France, where it is received on more favourable terms than that from England; spelter, flax, hops, linens, lace, carpets, and firearms; the last being sent in large quantities to Brazil, from whence they are again exported to Africa in exchange for slaves. The imports are principally composed of tropical produce, especially coffee, tobacco, and cotton, British manufactures, wool to the annual value of £550,000, chiefly from Germany, Poland, Hungary, and the southern provinces of Russia, and wine. The following account, abridged from the Tables of the Board of Trade (vol. v. p. 338), furnishes a general view of the commerce of Belgium for the first four years after its separation from Holland.

	Value of Imports into Belgium.				Value of Exports from Belgium.			
	1831. £	1832. £	1833. £	1834. £	1831. £	1832. £	1833. £	1834. £
France.........	584,995	2,249,768	1,927,505	1,425,952	1,684,749	2,420,365	2,226,618	3,121,534
Holland.........	404,419	348,399	730,426	1,073,436	281,826	321,765	708,046	712,274
Prussia, Hanse Towns, & Germany.	448,474	1,166,399	1,284,820	1,064,743	1,188,953	1,288,684	862,425	1,484,344
Great Britain ..	1,550,224	3,289,102	2,643,877	2,102,649	528,743	318,173	414,154	323,988
Russia.........	54,463	300,434	224,850	180,044	....	23,036	10,205	22,065
United States...	327,802	1,215,723	935,722	710,876	14,486	28,641	85,084	57,500
Cuba.........				298,315				24,825
Hayti.........				166,084				72
Brazil.........	280,763	273,704	308,435	399,367	120,000	11,818	10,984	16,694
Other countries..	269,383	492,772	645,110	531,211	43,454	37,196	129,153	114,754
Total,	3,920,523	9,336,301	8,700,745	7,952,677	3,862,211	4,449,678	4,446,669	5,878,050

Since 1834 the trade has no doubt increased, though the shipping possessed by Belgium still remains inconsiderable. At the revolution in 1830, many of the Belgian shipowners placed their vessels under the flag of Holland, as the latter retained all the colonies which formerly belonged to the two kingdoms jointly; and though some increase has since taken place, yet, on 31st December 1837, the number of merchant vessels belonging to the Belgian ports (including river ports), was only 156, and their tonnage 21,690; this included 5 steamers, but was exclusive of about 100 fishing sloops. (*Board of Trade Tables*, vol. vii. p. 286.)

The imports from the United Kingdom consist partly of foreign and colonial merchandise, but chiefly of British produce and manufactures. The declared value of the latter imported from 1831 to 1838 was as follows:—1832, £690,899; 1833, £896,429; 1834, £750,059; 1835, £818,487; 1836, £839,275; 1837, £804,917; 1838, £1,068,010; which last is equivalent to two-thirds of the British exports to Holland and Belgium jointly in 1821. The imports from Britain chiefly consist of sheep's wool, woollen, linen, and cotton yarns, machinery, iron, steel, hardware and cutlery, especially the finer kinds, cotton manufactures and small wares, woollen cloths, silks, brass, copper and pewter manufactures, and salt. A considerable portion of these goods, especially the yarns and cloths, are not intended for consumption in Belgium, but are smuggled across the French frontier; this is partly done by dogs trained for the purpose by being pampered in France, and half-starved and otherwise ill-used in the former country.

The bonding yards are at Antwerp, Bruges, Brussels, Courtray, Ghent, Liege, Louvain, Mechlin, Mons, Nieuport, Ostend, Ruremonde, Tournay, and Venloo.

Belgium communicates with the sea by Antwerp, Ostend, and Nieuport, by the canal of Bruges to Oostburg, by the canal of Dunkirk to Furnes, by the canal of Ghent to Terneusen, by the canal of Termonde to Hulst, by the Scheldt from Flushing to Antwerp, by the same river and the canal of Willebroek from Brussels to Antwerp, and by the canal of Louvain and the Scheldt from Louvain to Antwerp. But the only seaports of any consideration are Antwerp and Ostend.

Antwerp, a strongly fortified and magnificent town, is situated in 51° 14′ N. and 4° 22′ E. on low ground, on the right bank of the Scheldt, where the river makes a considerable bend. Population in 1838, 77,162. It is about 45 miles from the mouth of the Scheldt, reckoning from Flushing, where vessels bound for Antwerp must take a Dutch pilot as far as Lillo. The river at Antwerp is about 400 yards broad, and large vessels may sail up to the quay, and into a large basin; the depth at low water in front of the city being from 32 to 42 feet. Its commerce is still considerable, though far below what it was in the fifteenth and sixteenth centuries, when it had a population of 200,000, and 2000 vessels annually entered its port. In 1829, 995 ships arrived; 690 in 1830; and only 382 in 1831; but since this last year the shipping has greatly increased, and in 1837 the number of vessels which entered was 1426, and the amount of their tonnage, 225,759.

Ostend, a fortified seaport of West Flanders, is situated in 51° 10′ N. and 2° 54′ E. Population, 11,390. It possesses great facilities for carrying on trade with the interior by means of railways and canals. The town is almost surrounded by two of the largest of these, particularly that leading to Bruges, into which ships of great tonnage may enter with the tide. The number that arrive annually is from 500 to 600.

MEASURES, WEIGHTS, MONEY, FINANCES, &c.

Measures and Weights.—The French metrical system was introduced in 1820.

The following old measures are still partially used:—The Antwerp silk ell = 27·32 Imp. inches, and woollen ell = 26·97 Imp. inches; the Brabant ell = 27·56 Imp. inches; the aam of 50 stoops = 33¾ Imp. galls; the velte = 4·1 Imp. galls.; the last of 37½ viertels = 10½ Imp. qrs.; and 100 lbs. Brabant weight = 103·35 lbs. avoird. The Brabant league is 6076 yds.

Money.—The general monetary unit is now the French franc, which is divided into 100 centimes, and equal 9½d. sterling. In some places the Dutch florin or guilder (= 1s. 8d. sterling) is still retained, particularly in foreign exchanges; and in others the Brabant florin; the latter is divided into 20 sous, each of 12 deniers; 6 florins Dutch or Netherlands currency = 7 florins Brabant currency; 189 Dutch florins = 400 francs; and 110 florins 5 sous Brabant currency = 200 francs. The national coins are similar to those of FRANCE.

The usance of bills from London is 1 month's date. No days of grace are allowed.

Banks.—The *Société Générale pour favoriser l'Industrie*, instituted in 1822, with a charter for 27 years, discounts bills, receives deposits, makes loans, and in various ways facilitates commerce. Its capital (exclusive of a reserved fund) consists of 50,000,000 florins, or 105,820,000 francs (£4,166,666), and it issues notes to the amount of 40,000,000 francs, in sums of 50, 100, 500, and 1000 francs. The *Bank of Belgium* at Brussels was founded in 1835, with a charter for 25 years. Its capital is 20,000,000 francs, and its banking operations are similar to the society just named. Both are in part under the control of the government, and possess numerous dependencies. In 1837, the *Commercial Bank of Antwerp* was instituted with a capital of 25,000,000 francs; and numerous other institutions of the same nature exist in different parts of the kingdom.

Finances.—The public revenue in 1839 amounted to £4,163,821; the expenditure to £4,476,613. The national debt consists, 1*st*, of 100,000,000 francs, borrowed in 1831-32, at 5 per cent., chiefly for the organisation of the army; 2*d*, of 30,000,000 francs, borrowed in 1836, at 4 per cent., for railways and other means of communication; 3*d*, of a floating debt of 25,000,000 francs, at 3½ per cent., principally for railways and roads; total, 155,000,000 francs, or £6,200,000. This is exclusive of the Belgian portion of the debt of the Netherlands.

BELL-METAL, an alloy consisting of three parts of copper and one of tin. A little zinc is added to small shrill bells.

BEN-OIL, a fat or greasy oil procured by expression from the decorticated seeds of the *Guilandia moringa*, a tree which grows in Ceylon, Arabia, Egypt, and Ethiopia. It is inodorous, and does not readily become rancid; hence its excellence for the manufacture of jasmine, tuberose, and other scented oils.

BENZOIN, BENJAMIN, OR FRANKINCENSE, is the concrete resinous juice of the *Styrax benzoin*, a tree growing in Sumatra, Java, and Borneo. It is sometimes called a gum, but appears rather to be intermediate between resins and balsams. Benzoin is now chiefly employed to yield benzoic acid, and for other purposes in medicine. It is also used as a cosmetic, and to burn in censers in Roman Catholic churches.

"Benzoin occurs in large masses, on which the impression of the reed mats is visible. It is quite dry, and easily pulverizable, of a brownish-red colour, spotted with clear red, and, in proportion to its fineness, has intermixed a larger number of tears (*Benzoe amygdaloides*), resembling in size and form almonds, with an even fracture, having a greasy lustre, and translucent; while the mass is opaque, uneven in its fracture, and occasionally porous. Its taste is sweetish, balsamic, and resinous; its smell, especially when rubbed or kindled, pleasant and balsamic. Sp. gr. 1·068. The large masses, quite opaque, of a brownish or blackish colour, and destitute of white grains, is called benzoin in sorts." (*Duncan's Dispensatory.*)

BENZOIC ACID is commonly extracted from benzoin; but it exists also in storax, the balsams of Peru and Tolu, and other substances. "The usual process consists in boiling finely powdered gum benzoin in a large quantity of water, along with lime or carbonate of potash, by which means a benzoate is formed. To the solution, after being filtered and concentrated by evaporation, muriatic acid is added, which unites with the base, and throws down the benzoic acid. It is then dried by a gentle heat, and purified by sublimation" (*Turner's Chemistry*). Sublimed benzoic acid, or *flowers of benzoin*, which should alone be used for medical purposes, occurs in white needle-like prisms, of a flocculent appearance when in mass, with a soft, silky lustre; taste, at first sweetish, but afterwards pungent; odour peculiar, and highly characteristic. Sp. gr. 0·657. It is scarcely soluble in water, but completely in alcohol.

BERGAMOT, the fragrant fruit of the Bergamot orange-tree (*Citrus Bergamia*), from the rind of which an essential oil of delicious quality is obtained, both by pressure and distillation. This oil or essence is limpid, fluid, and yellowish, with a smell resembling that of oranges. Sp. gr. 0·888. It is used as a perfume.

BERMUDAS. [West Indies.]

BERRI, a Turkish road measure, equal 1826 Imp. yards.

BERRIES are soft and succulent fruits, having their seed lying loosely among pulp. A description of those chiefly imported will be found under the heads of bay, juniper, and yellow berries.

BERYL, an ornamental stone, differing little from emerald, except in colour. The emerald is green; all the varieties of other colours, tinged more or less yellow and blue, or altogether colourless, are beryls. Common form, the hexahedral prism; transparent, translucent, or opaque; lustre, vitreous. Sp. gr. 2·75. Localities, Brazil, Siberia, France, and United States. Such varieties of beryl as are clear, transparent, and exhibit brilliant shades of sky-blue, or mountain-green, are denominated by lapidaries *aqua marine*, or precious beryl. They are principally brought from the Brazils, and occur in considerable masses. (*Phillips' Mineralogy.*)

BETEL, an East Indian plant (*Piper betel*), the leaf of which, mixed with the fruit of the Areca palm (*A. catechu*), commonly called betel, or pinang nut, and fine lime [Chunam], forms a hot and acrid masticatory, in almost universal use in India and the Malayan Archipelago. The mixture is used by both sexes, and at all ages. It is said to be aromatic and stomachic, and also to produce intoxication in those not habituated to its use.

The chewing of betel forms an important branch of eastern etiquette. Marsden states "this custom is universal among the Sumatrans, who carry the ingredients constantly about them, and serve them to their guests on all occasions; the prince in a gold stand, and the poor man in a brass box, or mat bag. The betel-stands of the better ranks of people are usually of silver, embossed with rude figures. When the first salutation is over, the betel is presented as a token of politeness, and an act of hospitality. To omit it on the one hand, or to reject it on the other, would be an affront; as it would be likewise in a man of subordinate rank to address a great man without the precaution of chewing it before he spoke. All the preparation consists in spreading on the sirih, or piper betel leaf, a small quantity of the chunam, and folding it up with a slice of the pinang-nut. From the mastication of these proceeds a juice which tinges the saliva of a bright red, and which the leaf and nut, without the chunam, will not yield. This hue being communicated to the mouth and lips is esteemed ornamental; and an agreeable flavour is imparted to the breath. The juice is usually (after the first fermentation produced by the lime), though not always, swallowed by the chewers of betel." (*History of Sumatra.*)

Betel-Nut, or **Areca**, forms an article of extensive commerce from port to port in India; and a very large quantity is annually carried to China. The nuts are seldom imported into Britain, though Mr Milburn thinks they might be of use in some manufactures, as they are employed in dyeing cottons in Coromandel and Malabar.

BEZANT, a gold coin so called from Byzantium, the ancient name of Constantinople, which, during the middle ages, furnished most of the European kingdoms with gold money. Bezants were the *solidi* of the old scale; they were six to the ounce, and were in use till after the time of William Rufus. Bezant appears likewise to have been a term applied to all kinds of gold coin, and it was succeeded in the same general sense by the *gulden* or florin.

BEZOAR, an animal concretion highly valued in the East, where it is supposed to possess many extraordinary medicinal virtues. The greater portion is procured from the intestines of ruminating animals. The most highly valued is obtained from the stomach of the *Capra aegagrus*, or wildgoat of Persia. Bezoars have long fallen into merited disuse in Europe.

BILL OF ENTRY, a note of the particulars of goods entered at the Custom-house, delivered with certain duplicates to the collector or comptroller of the port, according to the terms of the Customs Regulation Act, of which an abridgment will be found under the head Customs.

BILL OF EXCHANGE may be defined a written order directing one party to pay a sum of money to another—either the person who gives the order or some third party—at some day fixed or ascertainable. The individual who issues the order is called the drawer; the person to whom it is addressed is called the drawee [DRAWER AND DRAWEE], until he consent to honour the draft or obey the order, after which he is called the acceptor [ACCEPTOR]. The bill may be passed from hand to hand by delivery or indorsation, according to circumstances [INDORSATION], and in the latter case, the person who makes over is called the indorser, and the person who receives the indorsee. He who is in the legal possession of the bill, and the obligation contained in it, is called the holder or the payee. Bills of exchange, as one of the most prompt and powerful engines in conducting trade, are peculiarly privileged by the law, requiring few words, and no solemnities of execution. There is no particular form for a bill of exchange required by law, farther than that the mandate to pay in money be distinct, and the person who is to pay, the person who is to receive, and the time of payment shall be ascertainable beyond a doubt. A mere request to pay money is not a bill, for the drawee is presumed to be the drawer's debtor, and the bill must be an absolute assignment of the debt; nor is an acknowledgment of debt, or a promise to pay which is part of a bargain for the sale of goods. Where a bill has all the apparent requisites, though an expression which takes it out of this species of document be fraudulently introduced to escape observation, it would appear that it will still be held a bill against the committer of the fraud. This was held where the word "at" was introduced in very small letters within the tail of the S of Sir in the address to the drawee (Allan v. Mawson, 4 *Camp.* 115). An order to pay in any thing other than cash is not a bill, as "in East India bonds," "in bank-notes," &c. The amount must be specific, and therefore the addition of the words "or whatever else may be due," would vitiate a bill. The money must be payable "at all events," and any condition which may affect the certainty of the declared intentions of the parties to hold it an absolute order to pay at some time or other, will vitiate the bill, as, where A B agrees to pay when C D shall marry, or at a certain time if C D be alive then, or if C D shall have disposed of certain property. From the time when a bill is drawn and delivered, it becomes by the operation of the contract of mandate, a document of debt in favour of the payee, for he who in fulfilment of an obligation gives an order on another to pay, becomes himself responsible on that other not performing. If the drawee is not indebted to the drawer, or as it is commonly termed, has "no effects," he will not be liable, even though he has accepted, to the drawer, but third parties who have received the paper for value, are not affected by the obligations between the original parties, otherwise than as they appear on the bill. [ACCOMMODATION BILL.]

A drawer generally appends his usual signature at the foot of the mandate. The acceptor to whom it is addressed generally signs below the drawer, either with or without the word "accepts" before his name. An indorser commonly puts his name on the back, with or without a direction to pay to a particular person. [DRAWER. ACCEPTOR. INDORSER.] It is a common practice to mention on the face of a bill that it is "for value received;" but this is not necessary, and in the general case value is presumed, and need not be proved by the party pleading it unless where a bill has been originally obtained through fraud, or in the case of a transfer by delivery by a person not entitled to make delivery, or in that of a bill which has been stolen. In Scotland the presumption of value is so strong that no evidence will be received to contradict it but the writ or oath of the party pleading it. Persons may come under general obligations as to bills which have to be made specific by the acts of others. Thus if one makes a bill blank in the name of the payee, any *bonâ fide* holder is entitled to fill in his own name. A person who delivers a blank bill stamp, drawn or accepted, is liable for whatever sum, covered by the stamp, may be filled in. Bills may be subscribed by procuration. Whoever takes such a bill, however, must assure himself of the procurator or agent's authority to grant it, for if he exceed his powers, the bill will not be effectual against his employer. A person who signs "per procuration" should mention that he does so, otherwise he will be personally liable.

Bills of exchange are divided into foreign and inland; the former are drawn in one country and payable in another, the latter are drawn and payable in the same country. A bill drawn in one of the three British kingdoms on a person resident in another, is, for some purposes, considered a foreign bill. The peculiar privileges which attach to bills as negotiable instruments, were first awarded to foreign bills, or to those drawn in Britain and payable abroad, and arose out of the absurd notions regarding the balance of trade. By 9 & 10 Wm. III. c. 17, and 3 & 4 Anne, c. 9, in England, and by the act 1696, c. 36, in Scotland, inland bills were placed in the same situation with foreign; and in most essential points, the laws as to both are analogous to each other. The chief distinction is in the practice of protest in England, which is necessary on occasion of the dishonour of a foreign bill, but is limited in effect and practice in inland bills. [Protest.] Foreign bills are generally drawn in several sets or parts, transmitted by different conveyances, in order that if any one or more should be lost, another may arrive safe for being presented. Each bears that it is payable on the others not being paid, as, "pay this my second bill of exchange, first and third of the same tenor and date not being paid," &c. The drawee of a bill drawn in sets should only accept one of the sets, as it is held that if he accept one set, and afterwards pay another set, he will not be liberated from the claim of a *bonâ fide* holder of the accepted ones.

By special statute in England, all bills under 20s. are void, and those between that sum and £5 must be made payable within twenty-one days after date, contain the name and description of the payee, and bear date at the time of making. They must likewise be attested by a subscribing witness (15 Geo. III. c. 51, 17 Geo. III. c. 30, and 27 Geo. III. c. 16). [Indorsement.] Persons negotiating in England bills or notes under £5, or on which less than £5 remains undischarged, made in Scotland or Ireland, or elsewhere out of England, forfeit a sum not less than £5, or more than £20 (9 Geo. IV. c. 65, § 1). Bills of exchange must be on a proper stamp. In Britain there is a distinction in the scale of duties for those drawn not exceeding two months after date, or sixty days after sight, which are said to be at short date, and those at longer periods, which are said to be at long date (55 Geo. III. c. 184, Sched.). There is no such distinction in the schedule of the Irish stamp act, 56 Geo. III. c. 56. There are separate tables for bills drawn in sets, each set requiring to be stamped. The principal exemptions are, bills issued by the Bank of England; bills drawn in pursuance of the acts for paying and supplying the army and navy (55 Geo. III. c. 184, Schedule). By 9 Geo. IV. c. 49, § 15, drafts on bankers within fifteen miles of the place of drawing are exempt, provided the place where the draft is issued be specified, and they bear date on or before the day of issue, and do not direct payment to be made by bills or promissory notes. Although, as above stated, a document which is not an order to pay money "at all events," is not entitled to the privileges of a bill, yet an order on any particular fund which may or may not be available, or depending on a contingency which may never happen, if made payable to bearer, or to order, or delivered to a payee, requires a stamp (Sched.). Persons connected with the issue of bills not duly stamped, forfeit £50; and persons post-dating bills, for the purpose of bringing them under the smaller duty applicable to bills at short date, or being in any way accessary to the issue of such post-dated bills, forfeit £100 (55 Geo. III. c. 184, §§ 11 & 12). Persons evading the stamp-duties under colour of the exemptions in favour of bank notes, and bills, and drafts, forfeit £100 (§ 13). A bill not duly stamped is not admissible as evidence of any description of obligation, and cannot be regarded by a court of justice (31 Geo. III. c. 25, § 19, and 55 Geo. III. c. 184, § 8). It is no objection to the stamp on a bill, that it is of greater denomination than that required by law, or that it is a stamp adapted to a different purpose (if of the assigned or greater denomination), provided it have not the different purpose stated on its face (55 Geo. III. c. 184, § 10). A bill cannot properly be stamped after it is issued; but if the commissioners have stamped it, the period of applying the stamp cannot be objected to against the holder of the bill. But where a bill is stamped, of the proper or higher value, with a wrong denomination on the face of it, it may be re-stamped.

Bills, though they are of the nature of a "chose in action," which is not strictly assignable, may be transferred from hand to hand or negotiated. [Chose in Action.] In England, to enable this to be accomplished, there must be negotiable words, such as "or order," "or bearer;" in Scotland this is not requisite. A bill payable to A B, or order, is indorsable by A B, and payable to his indorsee. A bill payable to A B, or bearer, is payable to whosoever holds it, A B's name not affecting the nature of the document. The various parties upon a bill, besides the acceptor, indorsers, drawers, and others, become liable for its payment on failure of the acceptor. The acceptor's failure to pay is commonly said to be an act of dishonour. If the drawee refuse acceptance, this likewise is dishonour, and is held to be such a prospective refusal of payment as entitles the holder to claim immediately from the drawer, or, if there be an indorser, on that indorser, who has recourse on the drawer; but to entitle him thus to recur on the original parties, there are obligations on the holder, without performing which he is held not to have duly negotiated. He must present the bill for acceptance and for payment on the proper occasions. [Presentment.] He must give notice of non-acceptance, or of non-payment; and in particular cases he must have the bill protested in such circumstances. [NOTICE. PROTEST.] In Scotland due negotiation gives a bill which has no irregularity on its face a peculiar privilege, by which it is held as the decree of a court, and put in immediate execution, unless cause can be shown for suspending. [DILIGENCE, SUMMARY.] Bills of exchange cease in England to be documents of debt on the expiry of six years from the time named for payment. By 9 Geo. IV. c. 14, § 3, no memorandum of part payment by the party receiving payment is sufficient to take a bill out of the rule. In Scotland, by 12 Geo. III. c. 72, § 37, and 23 Geo. III. c. 18, § 55, no action can be commenced on bills after six years from the time of payment. This provision does not affect the debt or obligation on which the bill proceeds, which is still open to be proved otherwise. (*Bayley on Bills. Chitty on Bills. Thomson on Bills.*)

FORM OF ORDINARY INLAND BILL.

£100. London, January 1, 1840.
Three months after date, pay to me or order, One Hundred Pounds, for value received.
John Smith.
To Mr William Anderson, Merchant, Glasgow. William Anderson.

N. B. This admits of the following variations, according to circumstances:—Instead of "three months after date," it may be "at sight," or at such a time "after sight," or at such a specified time, or "on demand;" and the instruction to pay may be "to AB or order."

FORM OF A PROMISSORY NOTE.

£100. London, January 1, 1840.
Three months after date, I promise to pay to Mr John Smith, or order, One Hundred Pounds, for value received. William Anderson.

The variations above noticed, in regard to a bill, are all applicable, so far as they are consistent with the nature of the document.

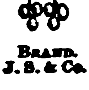
FORM OF A FOREIGN BILL.

£540. Havana, April 1, 1840.
Sixty days after sight of this FIRST of Exchange (Second and Third unpaid), pay to the order of Messrs Lamb and Thompson, Five Hundred and Forty Pounds sterling, value received; and charge to account, with or without advice of Thomas Forbes.
To John Walker, Esq., Liverpool. } John Walker, payable at the office of
Payable in London. } Messrs Barclay and Company, London.

The naming of the payee admits of the same variations as are exhibited in an inland bill. The time of payment may also be expressed in the various ways applicable to an inland bill. The term "usance" is sometimes employed to express the period of running in foreign bills. It means a certain time fixed by custom as between any two places, and the period covered by a usance will therefore depend on the places of drawing and payment. "An usance between this kingdom and Amsterdam, Rotterdam, Hamburg, Altona, or Paris, or any place in France, is one calendar month from the date of the bill; an usance between us and Cadiz, Madrid, or Bilbao, two; an usance between us and Leghorn, Genoa, or Venice, three." (*Bayley on Bills*, 251.)

BILL OF HEALTH. [QUARANTINE.]

BILL OF LADING is the acknowledgment given by the master of a ship for goods shipped. It is a negotiable instrument. Several parts or copies are made out, one for the use of the master, the others for the shipper, who, by means of them, can give a title to the consignee or other person for whom the goods are destined, to receive them. The following is an ordinary form of a bill of lading:



BRAND.
J. S. & Co.

Shipped in good order and well-conditioned by John Smith & Co., in and upon the good ship called the Elizabeth, whereof is master for this present voyage William Nelson, and now riding in the river Douro, and bound for Leith, ten hogsheads red Port Wine, being marked and numbered as in the margin, and are to be delivered in the like good order and well-conditioned at the aforesaid port of Leith, the dangers of the seas only excepted, unto Mr Henry Ivison, or to his assigns, he or they paying freight for the said goods, sixty shillings sterling per ton, with primage and average accustomed. In witness whereof, the master of the said ship hath affirmed to three bills of lading, all of this tenor and date, one of which bills being accomplished, the others to stand void.

W. NELSON.

Oporto, April 6, 1840.

When the goods are put on board, a receipt is generally given by the master; this is afterwards exchanged by the holder for the bill of lading. It must be written on a stamp. It will be observed that there is a clause, as in bills of exchange drawn in sets, providing that one set being honoured, the others are void. The bill has two objects. It fixes the amount and condition of the goods received, and for which the shipmaster is responsible [AFFREIGHTMENT], and conveys a title to demand delivery. It may, like a bill of exchange, be negotiated by simple indorsation and delivery, which will carry a right to the goods. No intimation to the shipmaster is necessary, he being bound to deliver to the holder. Notwithstanding the delivery of the negotiable instrument, the goods are still liable to be stopped *in transitu*, as in the hands of a middleman before they reach the consignee.

[STOPPING IN TRANSITU.] If the bill has been indorsed for value by the consignee, or his authorized agent, the property is passed, and the right to stop ceases. The right to stop is not barred by delivery of the bill unindorsed to a third party, nor by indorsation without value, or with knowledge on the part of the indorsee that the goods will not be paid for by the indorser, and that the transaction is fraudulent, nor where the indorsee has received notice of the consignee's insolvency. The indorsee however is not held bound to inquire into the ability of the indorser to pay for the goods, and to secure him it is not necessary that he should take the bill without notice that the goods have not been paid for; it is sufficient if he have not received "notice of such circumstances as rendered the bill of lading not fairly and honourably assignable" (Cumming *v.* Brown, 9 *East*, 516. See Salomons *v.* Nissen, 2 *T. R.* 674). Partial value will give an onerous right to a corresponding extent, and to that extent bar stoppage. Where the indorsee undertook to make advances which he failed to make, it was held that a claim on previous advances was no bar to the right to stop (Newsom *v.* Thornton, 6 *East*, 17); but "where the consignee, before his insolvency, and before the goods had arrived, has indorsed the bill of lading to a third party as a security for advances, the equitable right of the unpaid vendor to stop the goods (although he has no strictly legal right to resume possession even after the claim is satisfied) continues, subject only to the amount of such claim; and, if the indorsee holds in his hands any other property belonging to the insolvent, the unpaid vendor has an equity to compel him to resort to it in the first place." (*Morton on Vendors and Purchasers*, 196, 197. *Holt on Shipping*, 359-378. *Smith's Mercantile L.* 243-246. *Bell's Com.* i. 198, 219.)

BILL OF PARCELS is an account of goods sold given by the seller to the purchaser. It usually contains the description, quantity, price, and amount of each article; with a statement of the place, date, and terms of credit.

BILL OF SIGHT, a form of entry at the custom-house, by which goods, respecting which the importer is not possessed of full information, may be provisionally landed for examination. The bill must contain "the best description that can be given," and a perfect entry is required to be made within three days. [CUSTOMS.]

BILL OF STORE, a form of writing by which certain kinds of goods may be entered at the custom-house for reimportation; also a custom-house license permitting the provisions and stores necessary for a ship's voyage to be shipped duty free and without entry: this last is sometimes termed a *Victualling Bill.* [CUSTOMS.]

BILLINGSGATE. [MARKETS.]

BILLON, in *coinage*, a base alloy of gold or silver (generally the latter) in which copper is predominant. The word is derived from the French, but its origin is doubtful. In Spain billon money is called *moneda de vellon.*

BIRCH (*Betula alba*), a graceful forest tree, common in the cold parts of Europe. It is valuable for poor elevated soils, and on wet or springy land; but is seldom planted on favoured soils, as its timber is not durable, and in little esteem. It is chiefly used for underwood, and by the turner and wheelwright. In Scotland it is much employed for undressed palings; and sometimes cut into staves for herring barrels. It affords good charcoal. The bark yields a yellow dye for wool, and also the oil used in making Russia leather. The black birch of America (*B. lenta*), imported into this country, is a compact handsome wood; but it soon decays. It is used for forming the slides of dining-tables, and similar purposes.

BIRD-LIME, an adhesive, tenacious, vegetable product, obtained principally from the inner bark of the holly by bruising, long boiling in water, and fermentation; the mass being again boiled in water and evaporated to a proper consistence. This kind is of a greenish colour, odour resembling that of linseed oil, and having a bitter taste. Bird lime is also procured from the berries of the mistletoe, and other plants. In commerce it generally occurs in an impure state.

BIRD NESTS (EDIBLE), in oriental commerce, a celebrated luxury of the table, highly esteemed by the Chinese. They are the nests of a species of swallow (*Hirundo esculenta*) common in the Eastern or Malayan Islands, from whence immense quantities are exported into China. The nest when pure is of a cream-white colour, semitranslucent, and in shape and size like a quarter of an orange. It is muco-albuminous, and in soup possesses little or no taste,—at least to the European palate. In the preparation of this dish by the Chinese, however, such a number of fine stimulants are generally added, that of right it occupies the first rank amongst relishes at their tables. These nests are said by Meyen (*Quarterly Review*, vol. liii. p. 333) to be formed of the sea-weed, *Sphærococcus cartilagineus* var. *setaceus aq.* The swallow eats the fresh weeds, and permits them to soften for some time in its stomach, after which it throws up the mass now converted into a jelly, and sticks it together to form the nest. The nests are brought in their raw state to China, where they are cleaned in immense warehouses built for the purpose, and then exposed to sale. They are accounted in that country highly restorative.

The quantity of edible birds' nests annually exported from Java to China is estimated at no less than 200 peculs; of which by far the largest proportion is the produce of the Javan rocks and hills. The price which those nests of the best quality have of late years brought in the Canton and Amoy markets has been 40 Spanish dollars per catty. They are usually classed into first, second, and third sorts, differing in price from 40 to 15 Spanish dollars, and even 10 and less for the most ordinary. In the Malayan islands in general but little care is taken of the rocks and caverns which produce this dainty, and the nests procured are neither so numerous nor so good as they otherwise would be. In Java, where perhaps the birds are fewer, and the nests in general less fine than those to be met with in some of the more eastern islands, both the quantity and the quality have been considerably improved by European management. The caverns which the birds are found to frequent are cleansed by smoking and the burning of sulphur, and the destruction of all the old nests. The birds are then left undisturbed to form their nests, and the gathering takes place as soon as it is calculated that the young are fledged. If they are allowed to remain until the eggs are again laid in them, they lose their pure colour and transparency, and are no longer of what are termed the first sort. Much of their excellence and peculiar properties, however, depend on the situation of the place in which they are formed, and the nature of the different substances to which they are fixed. The best are procured in the deepest caverns (the favourite retreat of the birds), where a nitrous dampness continually prevails, and where, being formed against the sides of the cavern, they imbibe a nitrous taste, without which they are little esteemed by the Chinese. (*Ruschenberger's Voyages.*)

BIRDS OF PARADISE, a genus of birds (*Paradisea*) remarkable for the extreme elegance and richness of their feathers. There are various species, but perhaps the most elegant is that which is best known and oftenest seen—the great emerald (*P. apoda*). The beauty of the male of this species exceeds all description; and even the most magnificent drawings cannot represent the vivid and changing tints of the originals. The feather of these birds is much sought after to decorate the turbans of oriental chiefs, and in this and other countries is employed for the same purposes as the feathers of the ostrich. In dimensions the various species differ considerably. The bodies of most are not larger than that of a thrush, although the thickness of their plumage makes them appear the size of a large pigeon. They are found only in the Papuan islands, from whence they are carried by the natives to the Dutch settlements in the Spice islands; and are imported into Europe almost wholly from Batavia, the number of which it receives annually is stated by Dr Ruschenberger at 1500, valued at 10,000 florins.

The natives of New Guinea entrap the birds, or shoot them with blunt arrows; and they prepare the skins with considerable nicety, having removed the true wings, which are not so brilliant as the other feathers, and cut off the legs. The absence of feet in all the birds of paradise brought to Europe gave rise to the fable that they had no power of alighting, and were always on the wing. Their migratory habits may probably also have given some colour to this tale. At the nutmeg season they arrive in flights in the East Indian islands, where, according to popular belief, the strength of this spice so intoxicates them that they fall dead drunk to the earth.

> "Those golden birds that, in the spice time, drop
> About the gardens, drunk with that sweet food
> Whose scent hath lur'd them o'er the summer flood."—*Moore.*

BIRMA, AVA, OR BIRMAN EMPIRE, is situated on the western part of the Eastern Peninsula of India, betwixt 15° and 28° N. lat. It is bounded N. by Assam and the adjacent states; E. by Siam, and the Shan nations; S. by Siam, the sea, and the British district of Martaban; and W. by the sea and the British possessions of Aracan and Bengal. The area is estimated at nearly 200,000 square miles, and population at 4,000,000. The capital is Ava, in 21° 50′ N. 95° 50′ E.; pop. 50,000. The government is a despotic monarchy; but the sovereign, called *Boa*, has two councils, a public and a private one, through which his edicts are issued.

The two great divisions of the empire, Ava and Pegu, are throughout intersected by the river Irrawady, which, rising in the chain of the Himalaya, flows through several mouths into the gulf of Martaban. Ava occupies the upper or northern district of the Irrawady; and Pegu, in the lower or southern district, is a sort of delta entirely traversed by the alluvial branches of this river. Beyond the banks of the Irrawady, little is known respecting the interior. In the northern part of Ava, the country is mountainous and irregular, and the valleys generally narrow, but near Amarapoura, the country opens up; and the portion betwixt that city and the mouth of the Kyan Duayn, is the most fertile and populous part of the empire, containing Ava and several other considerable towns. Below Ava the Irrawady is a majestic river, and betwixt 18° N. lat. and the sea, it throws off a great number of branches of various magnitudes, watering an immense district, and affording an internal navigation scarcely equalled in any country. Gold, silver, copper, tin, iron, lead, and antimony are found in Birma, chiefly in the mountainous districts on the N. E.; but the metallic riches of the country are much neglected; coal, amber, nitre, salt, and limestone also exist abundantly in various places; the most remarkable mineral product, however, is petroleum, or mineral oil, an enormous quantity of which is produced from wells near Prome, and used throughout the provinces, yielding a large revenue to government.

The principal vegetable productions, in a commercial point of view, are catechu and teak; the latter, though generally diffused throughout the country, is mostly obtained from the forest of Sarawadi, betwixt the high and low lands. The chief objects of cultivation are rice, maize, millet, wheat, various pulses, palms, sugar-cane, tobacco, cotton, and indigo. Tea is grown near Amarapoura, but its leaf is coarse, and is seldom used but as a pickle. The seasons of Birma have a general resemblance to those of Bengal.

The internal commerce of the empire is considerable, being greatly facilitated by the Irrawady, and its tributaries: the foreign is nearly limited to a caravan trade with the Chinese, and the maritime trade at Rangoon. The intercourse with the Chinese takes place at annual fairs at Bhanmo and Medi, near Ava; and the commodities supplied by them consist chiefly of raw silk, copper, orpiment, quicksilver, vermilion, iron pans, brass ware, tin, lead, alum, silver, gold and gold leaf, earthenware, paints, carpets, rhubarb, tea, honey, velvets, spirits, musk, verdigris, dry fruits, paper, fans, umbrellas, wearing apparel. The principal exports are raw cotton, with ornamental feathers, edible birds' nests, ivory, horns, and a small quantity of British woollens. The total amount of this trade, including imports and exports, is from £400,000 to £700,000.

Rangoon stands in 16° 47′ N. lat., 96° 15′ E. long. on the northern bank of a branch of the Irrawady, about 28 miles from the sea; pop. 20,000. The climate, as in Calcutta, is divided into the cold, hot, and rainy seasons. In November, Fahrenheit varies from 60° to 86°, and in March and April from 72° to 101°. The town is accessible to very large vessels. A bar on the river has only about 2 fathoms at low water, but the rise and fall of the tide is frequently 21 feet. Rangoon having long been the asylum of bankrupts from different parts of India, is crowded with foreigners of desperate fortune, and the exchange exhibits a motley assemblage, such as few towns can present. The river is commodious for the building and repairing of ships, and vessels of from 600 to 900 tons are built here of excellent workmanship. The principal trade is carried on with Calcutta, Chittagong, and Dacca. The chief article of export is teak timber, besides which there are quantities of cotton of a superior quality, formerly used in the manufacture of Dacca muslins, gold and silver, catechu, stick-lac, ivory, glue, &c. The imports consist of British cotton manufactures, areca and cocoa nuts, tobacco, wrought and unwrought iron, copper, lead, quicksilver, borax, nitre, arms and ammunition, opium, sugar, arrack, rum, British earthenware, glass, &c. The duty on exports at Rangoon is 5 per cent.; on imports, 12½ per cent.

Measures and Weights.—The taong or cubit = 19·10 Imp. inches; the taing or league of 1000 tas or bamboos, or 7000 taongs, = 2 British miles 193 yds. The ten or basket of rice of 4 saits or 64 sales = 16 vis, or 57·36 lbs. avoird., but is commonly reckoned at ½ cwt. Grain, pulse, fruit, salt, and lime, are bought and sold by measure; most other commodities by weight. 1 paiktha or vis of 100 kiats = 3·59 lbs. avoird., but is commonly reckoned at 3½ lbs.; and the candy of 150 vis at 500 lbs. avoird.

Money is reckoned decimally as in China. No coin is minted. The circulating medium is chiefly composed of gold and silver bullion, which is estimated by the tical or kiat = 251 troy grains, and worth in silver, which is the standard, about 2s. 8d. sterling. Pieces of lead are used in small payments. The quantity of alloy in the precious metals varies considerably, and great waste is occasioned by frequent assaying.

The intercourse between the British and Burmese is regulated by a treaty between the two governments in 1826.

BISCUIT (Dan. *Skibstvebak.* Du. *Scheepsbeschuit.* Fr. *Biscuit.* Ger. *Zweibach.* It. *Biscotto Galetta.* Por. *Biscoito.* Rus. *Bort, Ssucher.* Sp. *Biscocho Galleta*), a kind of bread chiefly used by seamen, which is baked in the form of flat cakes in order to insure their being deprived of moisture, and so preserved from becoming mouldy during the continuance of long voyages.

BISMUTH (Fr. *Bismuth.* Ger. *Wismuth*), a brittle reddish-white metal; texture foliated; in hardness is between copper and lead; sp. gr. 9·83; sensible odour and taste; fusible at 460°. It is scarcely malleable, breaks under the hammer, and cannot be drawn into wire. Bismuth is a very rare metal. It is occasionally found native, but is usually obtained in a combined state in Cornwall, Bohemia, Saxony, and Sweden. As met with in commerce it is impure, generally containing iron and arsenic, and probably some other metals. It is used for communicating fusibility to other metals, as in forming *solders*; also in making some kinds of pewter. In the arts it is often called *tin glass.* A white powder called *magistery of bismuth* or *pearl white* is obtained from the nitrate of bismuth, and used in medicine as a tonic. (*Brande, Fyfe, &c.*)

BIT, a West Indian silver money, worth about 5d.: it is properly the Spanish real of provincial plate (= 2 reals vellon). The term is likewise applied to the small circular piece frequently cut out of the centre of the hard dollar.

BITUMEN, or *Mineral Pitch*, a combustible substance, of which there are several kinds. *Elastic Bitumen* is of various shades of brown, and has a highly bituminous odour. Hitherto it has only been found in the Odin Mine near Castleton, in Derbyshire. *Compact Bitumen* is of a brownish black colour; one variety called *maltha*, may be impressed by the nail; another called ASPHALTUM is very hard and brittle. The softer variety has not been put to any use, but the harder is used for a great many purposes.

The mineral oils, NAPHTHA and PETROLEUM, are also sometimes included under the head of bitumen. These substances are found in the earth, or issue from its surface; but though commonly stated as minerals, they are all of vegetable origin. (*Phillips' Geology and Mineralogy.*)

BLACKING, a factitious shoe-black, in general composed chiefly of ivory black and beer.

BLACKLEAD. [PLUMBAGO.]

BLACK-WOOD, a term generally applied to the timber of different species of *Diospyrus* which grow in various parts of the East Indies. The best is the black-wood or ebony of the Mauritius. The logs are of various sizes; but those about 6 inches in diameter, long, and straight, are preferred. They are to be chosen free from bark and white wood, without cracks, not worm-eaten or decayed. This wood is used for turning, inlaying, and other purposes. The black-wood of Van Diemen's Land is the timber of the *Acacia melanoxylon.*

BLANKETS, a soft loosely-woven woollen stuff, commonly used for bed covering, form a considerable branch of the British woollen manufacture. The best are made from unmixed British wool. Localities of the manufacture, Dewsbury, Witney, Dalverton, and Glamorganshire, and on a small scale at Hawick in Scotland, and Kilkenny in Ireland. This trade has experienced a great increase of late years. The quantity exported in 1820 amounted to 1,288,409 yards; but in 1839, it had risen to 3,148,846 yards: of which 1,951,743 yards were sent to the United States, 364,351 yards to British America, and 339,968 yards to Australia.

BLEACHING POWDER. [CHLORIDE OF LIME.]

BLENDE, a native sulphuret of zinc. [ZINC.]

BLOCKADE, in the law of nations, takes place when a fort, city, or other place belonging to one of two belligerent powers, is watched by the troops or ships of another, for the purpose of preventing the ingress or egress of people or effects, and especially with the view of starving the garrison into submission. Commercial questions arise principally from blockades to seaward, and they generally come either in the form of cases before the admiralty courts, for the condemnation of neutral vessels which have infringed the blockade, or in insurance questions where a breach of warranty of neutrality is alleged. [INSURANCE.] The operations of France and England during the late war brought forward several very serious questions about the effect of declarations of blockade. Between the Berlin decrees on the one hand, and the Orders in Council on the other, two powers declared Europe and America to be in a state of blockade as respects the one or the other, and had the principles been carried to their full extent against all breaches of these proclamations, the seas would have been converted into one general arena of piracy and rapine. It has been held, however, that to be acknowledged in a law court, a blockade must be an actual and effectual one. "In the very notion of a complete blockade," says Lord Stowell, "it is included, that the besieging force can apply its power to every point in the blockaded state. If it cannot, it is no blockade of that quarter where its power cannot be brought to bear: and where such a partial blockade is undertaken, it must be presumed that this is no more than what was foreseen by the blockading state, which nevertheless thought proper to impose it to the extent to which it was practicable" (4 *Robinson's Reports*, 66, 67). The circumstance, however, that from the state of the wind, or the warlike operations of the besieged, a neutral ship has been able to pass the blockade, will not affect its legality; indeed were it not that there are always chances in favour of evasion, there would be few discussions as to the extent of blockades. On the part of this country, a blockade is proclaimed by an Order in Council. It is believed, that in distant regions, a commander of a ship of war has power to extend such a blockade, but certainly not within the limits of Europe. Neutral merchants cannot be bound to observe one of which their governments have not received official notice. (*Chitty's Law of Nations*, 128-147. *Marshall on Insurance*, 74, 75.)

BLONDE, a species of LACE. There are both black and white blondes, which again are either real or in imitation. The best of the former are imported from France, being extensively manufactured at Alençon in Normandy.

BLOOD-STONE is a species of calcedony coloured by chlorite, with numerous bright red spots like drops of blood; it is called also heliotrope and oriental jasper. It is found in India, Siberia, Iceland, Isle of Rum, though the best comes from India. It is in request by the Chinese as an ornament to their girdle-clasps.

BLUBBER is the fat substance (*Adeps*) found immediately under the skin, and over the muscular layers of whales and other large sea animals, and of which train-oil is made. In the whale, it invests the body about six inches thick; but near the under lip it is found two or three feet thick.

BOARD, in carpentry, means timber sawed to a less thickness than nine inches; all above that thickness are called *planks*.

BOARD (Fr. *Bureau*), a term used to designate, in their collective capacity, certain persons to whom is intrusted the management of some department, office, or joint-stock association. Thus the lords of the treasury, the commissioners of customs, and the persons chosen from among the proprietors to manage the operations of a bank, are, when met together for the transaction of the business of their respective offices, styled the Board of Treasury, the Board of Customs, the Board of Directors.

BOAT, a small uncovered vessel, commonly moved by rowing.

The owner of every vessel shall paint, or cause to be painted, upon the outside of the stern of every boat belonging to such vessel, the name of the vessel, and the port or place to which she belongs, and the master's name withinside the transum, in *white* or *yellow roman* letters, *not less* than *two inches* in *length*, on a *black ground*, on pain of the forfeiture of such boat not so marked, wherever the same shall be found. And the owner of every boat not belonging to any vessel, shall paint, or cause to be painted upon the stern of such boat, in white or yellow roman letters of two inches in length, on a black ground, the name of the owner or owners of the boat, and the port or place to which she belongs, on pain of forfeiture (3 & 4 Wm. IV. c. 53, §§ 8, 10, 11, 12).

Every pilot-boat or vessel, or other boat or vessel in the service of any corporation or society established by law in relation to pilotage, or of, or belonging to, any person authorized to act as a pilot by such corporation or society, shall at all times, and on every station, be painted or tarred entirely black, except the name or other description now required by law to be painted on such boat or vessel (3 & 4 Vict. c. 68, § 2).

BOBBIN, a kind of small cord made of linen or cotton. The common bobbins, made of linen, are for progressive sizes known by the dealer as Nos. 5, 7, 9, 11, 13, 15. *Scotch bobbins* are made of cotton, of the same numbers, and designed to imitate the preceding. They are purchased by the dozen, and are usually contained in papers each of two dozens (*Perkins on Haberdashery*).

BOBBIN-NET, a kind of net-work made by machinery, and generally bearing the characteristics of Lace.

BOISSEAU, a French corn-measure, equivalent to nearly one-third of an imperial bushel.

BOLE, an earthy mineral, formerly an article of the *Materia Medica*, but now disused in Europe, except occasionally as a veterinary medicine. It is dull, of various colours, and has a greasy feel. Localities, Armenia, Saxony, Tuscany, Ireland, Skye. Armenian bole is still used in the East.

BOLIVIA, or UPPER PERU, a state of S. America, situated between lat. 9° 30′ and 25° 40′ S., and long. 58° and 71° W.; boundaries, N. and N. W. the States of North and South Peru, E. Brazil and Paraguay, S. La Plata States and Chili, and W. the Pacific Ocean. Area, 318,000 square miles. Pop. about 1,000,000, more than three-fourths being Indians and mixed races. It is divided into six departments, Chuquisaca, La Paz, Oruro, Potosi, Cochabamba, and Santa Cruz, which again are subdivided into provinces. Capital, Chuquisaca or La Plata, an inland city, pop. 18,000. The government is republican, the executive power being vested in a president for life, with the privilege of naming his successor; and the legislative functions nominally in three bodies, a senate, tribunes, and censors.

The country presents very different conditions of surface, elevation, and climate. It is traversed by the Andes, particularly towards the W., while on the E. it stretches out into plains, which are watered by the Beni, Mamore, and other rivers which unite to form the Madeira, the largest affluent of the Amazon, and the Pilcomayo, one of the chief branches of the Plata. This region is fertile, but it is nearly covered with vast primeval forests. In the plains, the climate is hot and unhealthy, except in the elevated valley of the Desaguadero, where it is temperate, especially during the winter season, from May to November. Earthquakes are common on the coast.

The mineral productions are gold, principally found on the E. declivity of the E. Cordillera of the Andes, and in the sands of the rivers which fall from that range; silver from the mines of Potosi, which, however, are now much less productive than formerly. In the year 1837, the number of marcs of silver coined at the mint of Potosi was 243,538, value £414,015 sterling; in the same year, the number of marcs of gold coined was 1367, value £39,506 (*Board of Trade Tables*, v. vii. p. 335). Besides the precious metals, copper is procured at Corucuero, and other places; there are also lead, tin, salt, brimstone, and nitre. Of vegetable products, the chief is timber; the cocoa of Apollobamba and Moxas is celebrated; the sugar cane and tropical fruits flourish in profusion on the banks of the Beni; and the E. of the Andes abounds in cascarilla, indigo, cotton, rice, coffee, tobacco, canes, cinchona, copaiba, sarsaparilla, gum-elastic, vanilla, and other valuable drugs and dye-woods. The manufactures principally consist of cottons and glass made at Oropesa; woollens at La Paz; and hats at St Francisco de Atacama.

The commerce is inconsiderable, owing chiefly to the difficulties which have to be encountered in bringing the produce to market. The people have not yet learned to avail themselves of the navigable affluents of the Amazon and La Plata, by means of which an intercourse might be opened with the ports on the E. coast of S. America; and at present the trade with Europe takes place wholly through the ports of the Pacific, which cannot be reached except by toilsome passages. The country to Cobija, the only Bolivian port, is traversed by only one road, that from Oruro, and that is practicable only for mules and llamas. Cobija, though a free port, is therefore but little frequented; the Bolivians preferring to obtain their foreign imports through Arica and Tacna, ports of Lower Peru, notwithstanding a transit duty of 3 per cent. being there imposed upon them. These imports chiefly consist of hardware and a few articles of finery. The exports, from the causes already assigned, are nearly altogether confined to portable commodities, such as the precious metals, woollens, and hats.

Measures and Weights same as in SPAIN.

Money is reckoned in dollars, each divided into 8 rials. The Bolivian national or hard dollar, when of full weight, is worth nearly 4s. 3d., being minted at the rate of 8½ from the Castilian marc (= 3550½ troy grains), of silver, 65·72ds. fine, or of the standard of 10 dwts. and 20 grains pure, out of 12 dwts. But since the year 1830, all the silver coins issued from the mint of Potosi, with the exception of dollars, have been of the standard of 8 dwts., about 26 per cent. less than the national standard; and although the issue of this small and base coin is nominally restricted to $200,000, this regulation is not always adhered to; thus in 1835 its issue amounted to $509,000; in 1836 to $303,186; and in 1837 to $301,563.

The Public Revenue was in 1832 $1,700,719; the expenditure in the same year is said to have been $1,586,026.

The territory of Upper Peru was detached from the Spanish viceroyalty of Peru in 1778, and annexed to that of Buenos Ayres. It was delivered from the Spanish yoke by the victory of Ayacucho in 1824; and, in 1825, a congress assembled from the different provinces, declared it an independent republic, under the name of Bolivia, in honour of General Bolivar, by whom the country was liberated, and its constitution framed. [PERU.]

BOLL, a measure for corn in Scotland prior to the introduction of the Imperial system. It was divided into 4 firlots, 16 pecks, or 64 lippies or forpits; and 16 bolls made 1 chalder. In each county, however, the barley-boll (used also for oats and malt) differed commonly from the wheat-boll (used also for pease, beans, rye, and salt). The Linlithgow or Scottish standard barley-boll = 0·728140 imperial quarter, and the Linlithgow wheat-boll = 0·499128 imperial quarter.

To convert Linlithgow wheat-bolls into imperial quarters, multiply the former by the fraction 0·499128; or, approximately, substitute for the wheat-boll, firlot, peck, and lippy, the imperial half-quarter, bushel, peck, and half-gallon respectively; or, more nearly, multiply the number of bolls by 2000, and divide the product by 4007.

To convert prices per Linlithgow wheat-boll into prices per imperial quarter, multiply the former by 2·003494; or, approximately, take the double of the prices per wheat-boll; or, more nearly, add to the price per wheat-boll a halfpenny for every pound, and then double the result.

To convert Linlithgow barley-bolls into imperial quarters, multiply the former by 0·728140; or, approximately (as 33 barley-bolls equal 24 imperial quarters nearly), deduct $\frac{3}{11}$ths from the barley-boll.

To convert prices per Linlithgow barley-boll into prices per imperial quarter, multiply the former by 1·373363; or, approximately, add 4½d. per shilling to the price per barley-boll; or, more nearly, add to the price per barley-boll its fourth part, together with the half of the fourth part.

On the other hand, to convert imperial quarters into Linlithgow wheat-bolls, multiply the former by 4007, and divide the product by 2000; and to reduce the price per imperial quarter to the price per wheat-boll, take a halfpenny per pound from the former, and then halve the result.

To convert imperial quarters into Linlithgow barley-bolls, multiply the former by 1·373363; or, approximately, multiply the imperial quarter by 11, and divide the product by 8; and to reduce the price per imperial quarter to the price per barley-boll, multiply the former by 0·728140; or, increase the price per imperial quarter a farthing for every pound; from the result take $\frac{1}{11}$th part, and then from the remainder take ¼th part.

The Linlithgow measures were in use only in the counties of Linlithgow, Edinburgh, Dumfries, Haddington, Lanark, Peebles, Perth, and Wigtown. In the other counties the measures differed generally, both from the Linlithgow, and from each other. The following Table shows the relative proportion of these local measures to imperial, as fixed by the verdicts of juries in the different counties, in terms of the act 5 Geo. IV. c. 74, § 18:—

TABLE showing the number of Bushels, Pecks, and Gallons, Imperial Measure, equivalent to one Boll of the Old Scottish local Measures.

	Bar. Oats, &c.			Wheat, &c.				Bar. Oats, &c.			Wheat, &c.		
	B.	Pk.	Galls.	B.	Pk.	Galls.		B.	Pk.	Galls.	B.	Pk.	Galls.
Aberdeen	6	1	1·544	4	3	1·416	Kincardine, South part	6	0	0·104	4	0	1·072
Argyll, Inverary	6	1	0·411				Kinross	5	3	0·565	3	3	1·919
—— Achnabreck	6	2	0·426				Kirkcudbright						
—— Cantire	7	3	1·014				—— bet. Orr and Fleet.	10	2	1·311			
Ayr	7	3	0·045	3	3	1·022	—— West of Fleet	11	2	1·067			
Banff	6	1	0·256	4	1	0·551	—— East of Orr	9	2	1·556			
Berwick	5	3	0·667	3	3	1·111	*Linlithgow*	5	3	0·601	3	3	1·944
Bute	7	3	0·759	3	3	1·379	Nairn { Barley	6	0	1·097	4	2	0·823
Caithness	6	1	0·566				Nairn { Oats	7	2	1·371			
Clackmannan	6	0	1·418				Renfrew	6	1	0·445	3	3	1·944
Dumbarton	6	1	1·019	3	3	1·943	Ross and Cromarty	5	3	1·735	3	3	1·699
Elgin and Moray	6	0	1·006	4	0	1·691	Roxburgh	6	0	0·442	6	0	0·442
Fife	5	3	0·957	4	0	0·188	—— Teviotdale	7	2	0·552	5	0	1·508
Forfar, Dundee	5	3	1·353	4	0	0·320	Selkirk	7	1	1·274	4	3	0·765
—— other places	6	0	0·104	4	0	1·072	Stirling	6	0	1·181	3	3	1·919
Inverness	6	0	0·917	4	0	0·484	Sutherland	6	0	0·102	3	3	1·944
Kincardine, North part	6	1	1·544	3	3	1·944							

The standard Scottish meal-boll contained 8 Dutch or Lanark stones, equal 139·136 lbs. avoirdupois, but usually reckoned 140 lbs., in consequence of the Lanark stone being estimated at 17⅖ lbs. avoirdupois.

In the flour measure at present in use a boll is reckoned equal to 140 lbs. avoirdupois: this boll is divided into 10 stones or pecks, and 2 flour bolls equal 1 sack. [Bushel. Measures and Weights.]

BOMBAY. [East Indies.]

BOMBAZINE, a twilled fabric, having its warp of silk, and its shoot or weft of worsted. The worsted is thrown on the right side which has a twill upon it. It was formerly made entirely for mourning garments, but it is now manufactured of various colours. Bombazines are all woven with silk of the natural colour and dyed afterwards. The pieces are generally sixty yards long; the width is intended for ⅝ yard, but seldom measures more than half a yard, oftener under than over. They are almost wholly made at Norwich, where the manufacture was introduced by Flemish artisans, who fled from the persecutions of the Duke of Alva. [Silk Manufacture.]

BOND. A description of obligation which assumes a variety of forms, and is connected with many of the contracts separately considered in this work. A simple bond is an obligation to pay money, generally with interest, at a certain time, or under certain circumstances.

In England, "a bond, or obligation," is defined as "a deed whereby the *obligor* [or person bound] obliges himself, his heirs, executors, and administrators, to pay a certain sum of money to another [the obligee] at a day appointed" (*Blackstone's Com.* ii. 339). A bond must be under seal, and thus constitutes a higher obligation than a simple contract. An obligation by bond extinguishes a simple contract debt, but the bond of a surety will not extinguish the debt of the principal (White *v.* Cyler, 6 *T. R.* 176). A bond being *a chose in action* [Chose in Action], cannot be assigned so as to enable the assignee to pursue on it in his own name; but by modern practice the assignee sues in name of the obligee, a power to that effect being inserted in the assignment. It is usual to grant bond to pay a certain sum, provided a certain act is not performed; or, more properly speaking, to grant an obligation which shall be void if a particular act be performed. It is thus not illegal by the usury laws to take a bond for a larger sum than the principal and legal interest of a debt, if the debt be not paid by a day certain. "Where a penalty is inserted merely to secure the enjoyment of a collateral object, the enjoyment of the object is considered in equity as the principal intent of the deed, and the penalty is only accessional, and only operates to secure the damage really incurred, until the actual damage sustained shall be ascertained by an issue (*Bacon's Ab., Obligations, A.*). By 4 & 5 Anne, c. 16, §12, "where an action of debt is brought upon any bond which hath a condition or defeasance to make void the same upon payment of a less sum at a day or place certain; if the obligor, his heirs, executors, or administrators, have, before the action brought, paid to the obligee, his executors, or administrators, the principal and interest due by the defeasance or condition of such bond, though such payment was not strictly made according to the condition or defeasance, yet it shall and may nevertheless be pleaded in bar of such action, and shall be as effectual a bar thereof as if the money had been paid at the day and place according to the condition or defeasance, and had been so pleaded;" and by § 13 of the same statute, if, during the dependence of an action on a bond with penalty, the defendant tender in court the principal sum, with interest and costs, he shall be discharged. Though the claim of the obligee is adjusted to a fair demand of principal, interest, and damages, yet where these exceed the principal sum and penalty, the court will not generally carry the debt beyond the penalty in the bond. Recourse may sometimes, however, be had by insisting on specific performance of the original agreement, the performance of which is to relieve the obligor from the penalty in the bond. A bond requires no particular form, provided it distinctly set forth an obligation to pay money, and be sealed and delivered. By 55 Geo. III. c. 184, "a bond in England, and a personal bond in Scotland, given as a security for any definite and certain sum of money," is liable to an *ad valorem* stamp, commencing with £1, where the sum does not exceed £50. The same scale of duties applies where the bond is "given as a security for the repayment of any sum or sums of money to be thereafter lent, advanced, or paid, or which may become due upon any account, together with any sum already advanced or due, or without, as the case may be." Where the total amount to be recovered on such an obligation is unlimited, the stamp-duty is £25. One of the chief advantages of a bond is, that it binds not only the obligor but his heirs in specialty, so that the holder's claim has precedence of those who are creditors by simple contract, over the assets, real and personal, of the deceased. By 3 & 4 Wm. IV. c. 104, however, which first made real property assets for simple contract debts, the debtor must have expressly bound himself "*and his heirs*," to give a preference over the *real* estate. A court of equity will order voluntary bonds, or other special contracts, without consideration, to be postponed to genuine debts, though merely "simple contract" debts (3 *P. Wms.* 222). By the statute of limitations, simple contract debts are barred by the expiry of six years from the time of their origin. By 3 & 4 Wm. IV. c. 42, § 3, action may be brought on a bond at any time within twenty years from its falling due. Bonds, though granted simply for payment of money, if made in furtherance of any illegal or immoral contract, may be barred by pleading the nature of the transaction (*Blackstone's Com.* ii. 339-341. *Bacon's Abridgment, Obligations*).

In Scotland, the bond is of two kinds, moveable and heritable. The former resembles the English bond, and is employed for an equally great variety of purposes,—among others, for that of accomplishing cash-credits with banks [Cash-Credit]. Sureties or cautionries, out of the course of mercantile transactions, and requiring much formality, are generally accomplished by bonds of cautionry. In Scotland it is not the practice to seal deeds. A bond is executed for all practical purposes, and proves itself until reduced or disproved, if signed in presence of two male witnesses, who sign with the obligants, and whose names and designations are recorded in the body of the deed, along with that of the writer, and the day and place of executing. It is usual to insert a clause of registration, by which the bond may be summarily enforced without the intervention of a court of law [Registration, Clause of]; but to admit of this recourse, the obligation must be so precise and certain, that it may at once be enforced without farther inquiry, and so nothing must be left to future ascertainment, though there is an exception in the case of cash-credits, the sum for which execution proceeds in their case being fixed by reference to an account extracted from the bank books. [Cash-Credit.] Heritable bonds are bonds on real property, and bear some resemblance to mortgages in England. The simple heritable bond is now little used as a security for money, but is generally united with the disposition in security, which being a reversionary transfer of the property itself to the lender, affords greater facility for procuring payment from the estate (*Burton's Manual*, 543-546).

BONDED GOODS. [Warehouse.]

BONES. The bones of animals have long been used in turnery and other arts. In this country, however, their chief use is as a manure on light soils, particularly for turnips; and the facility of their carriage has permitted many distant and hilly districts to be improved at a comparatively small cost. Little difference is observed in the kind of bones used; but those boiled or fermented are generally preferred. Their effect as a manure is said to depend on the phosphate of lime contained in them, and in their power of absorbing and retaining moisture. Before being used they are crushed into different sizes called *drill bones*, *medium*, and *dust*; for which purpose, mills have been erected in many parts of the country. Bone manure was first introduced in 1800, but it was not extensively used until within the last ten years. The increasing demand for this material has led to its importation from foreign, and even distant countries; of late, considerable difficulty has been experienced in meeting the demand. The price in 1840 was, bone dust medium 22s. to 23s., and drill about 21s. per imperial quarter. These high prices have led to a system of adulteration which is very generally practised in mixing this manure with saw-dust, slaked lime, and numerous other ingredients.

BONUS (Lat.), *good*, a term commonly used to express an extra dividend or allowance to the shareholders of a joint-stock company, out of its accumulated profits.

BOOK, a name applicable in a general sense to almost every literary composition, but usually confined to such compositions as are large enough to form a volume. Printed volumes are distinguished according to the number of leaves produced from one sheet of paper. *Folio* is the largest size, of which 2 leaves or 4 pages make a sheet; *Quarto* or 4to, 4 leaves or 8 pages; *Octavo* or 8vo, 8 leaves or 16 pages; *Duodecimo* or 12mo, 12 leaves or 24 pages; *Octodecimo* or 18mo, 18 leaves or 36 pages, and so on. These again differ according to the size and form of the sheet. Thus there are royal, demy, post, and crown octavos; and the same with the others.

The modern book-trade dates from the discovery of the art of printing with moveable types by John Gutenberg of Mayence, in 1441. In 1471, the art was brought to London by William Caxton, a mercer, and from that time until 1600, the activity of the press was considerable; the works chiefly issued being Bibles and works on divinity, translations of the classics, versions of French and Italian romances, and old chronicles. Few, however, but "clerks and noble gentlemen" could then use these works, as their expense and the imperfect state of education placed them beyond the reach of the people in general. In 1505, 20 pence, a sum then equal to a labourer's weekly wages, were paid for a "Primer" and a "Psalter;" and in 1516, "Fitzherbert's Abridgment," a folio law-book, was sold for 40 shillings, a sum which at that time would have bought 3 oxen. The edition of a book, during this period, averaged about 200 copies. The stormy period from 1600 to the revolution in 1688, was, although the age of Shakspeare, Bacon, and Milton, upon the whole less favourable to the diffusion of knowledge; and the number of books issued, unconnected with religious or political controversy, was very small. Only two editions, or about 1000 copies, of Shakspeare, were printed betwixt 1623 and 1664. From 1666 to 1680, the works printed were, 947 divinity, 420 law, 153 physic, 397 schoolbooks, and 253 geography, including maps, or in all, only 3550, of which, about one-half were single sermons and tracts, and a considerable proportion reprints. The period from 1688 to the accession of George III. in 1760, was much more celebrated. Newspapers were established on a regular footing, both in London and the provinces: in 1731, appeared the "Gentleman's Magazine," the first of that class of periodicals produced in England, and in 1749, the first review, "The Monthly;" and other similar works soon followed. Publishers attained higher influence in society, and the trade of books went much more than formerly into regular commercial channels. The number of new ones printed during this period was, however, not large, as the publishers appear to have aimed less at novelty than at selling large impressions of a few standard works. Betwixt 1700 and 1756, excluding pamphlets and tracts, only 5280 new books appeared; or, on an average, 93 annually. The period from 1760 to 1800 is distinguished less for originality than for the increased diffusion of literature. Periodical works were multiplied, and the principle of "number books" was then first developed. Of the latter, one of the most successful was Smollett's History of England, which sold to the extent of 20,000 copies. Towards the end of the century, the average number of new books published annually was about 370, exclusive of pamphlets. From 1800 to 1827, the average annual number of new books, exclusive of pamphlets, was about 588; showing a very considerable increase relatively to the preceding period. Notwithstanding this increase, little had been done for many years in economizing the mode of conveying knowledge; indeed, as compared with the preceding centuries, the price of books had advanced, and the reading portion of the middle classes had little or no opportunity of gratifying their taste, except through the medium of circulating libraries, and reading clubs. A larger class of readers, however, had now arisen, for whom a new species of literature was to be provided. With the view of meeting the wants of this class, "Constable's Miscellany" appeared in 1827; soon afterwards, the Society for the Diffusion of Useful Knowledge was instituted, for the purpose of conveying sterling information in a cheap form, and a number of enterprising publishers subsequently entered upon the same field; the attention of all being likewise directed to the issue of cheap editions of the great writers. The success which in general attended these operations has gradually revolutionized the book trade. The portly folios and quartos of former times have given place to octavos and duodecimos; and publishers now find it their interest, in bringing out works even for the wealthiest, to place them at the same time within reach of the generality of the middle class; reimbursing themselves for the lower price charged by the larger impression sold. This change has been effected without producing, as many anticipated, any diminution of new works. On the contrary, there has been a considerable increase; and the truth of the observation, "that the more people read, the more they will read," has been confirmed. The number of *new* works, excluding pamphlets and reprints, was, in 1828, 842; in 1829, 1064; in 1830, 1142; in 1831, 1105; in 1832, 1152; in 1833, 1180; in 1834, 1220; in 1835, 1382; and in 1836, 1332; the last embracing 1573 volumes.

The principal localities of the book trade are London, Edinburgh, Dublin, Oxford, Cambridge, and Glasgow. Of these, by far the most extensive is London, which may be regarded as the emporium of the whole kingdom, as the provincial publishers have all agents there, to whom a large proportion of their works are consigned as soon as printed. The capital is in particular distinguished for periodical literature, which in point of extent is unparalleled in the world. According to a late statement, the periodicals issued in December 1837 were as follows:—

Weekly, religious, 6 ; literary criticism, 2 ; musical criticism, 1 ; medical, 4 ; scientific, 2 ; advocacy of particular opinions, 2 ; miscellanies, 18 ; tales, 5 ; attempts at fun,—mostly trash, 7 ; sporting slang, 1 ; total, 48 ; of which, 21 were published at 1d., 8 at 1½d. ; 7 at 2d., and the rest at higher prices, varying up to 8d. *Monthly*, including weeklies issued in parts, 236 ; whereof, general literature, 58 ; science, 48 ; religious, 46 ; histories of England, 4 ; works issuing in volumes, 17 ; fine arts, 20 ; fashions, 6 ; the remainder chiefly children's periodicals. *Quarterly*, 34. The aggregate circulation of the whole is unknown; but the number of periodicals sold on the last day of each month (1837) was stated at 500,000, and their cost, £25,000 ; and the number of parcels despatched in the same day by the London booksellers to the country, 2000. The last would be much greater, were it not that the majority of the Scotch and Irish provincial booksellers transmit their London orders through the medium of their agents in Edinburgh and Dublin.

The declared value of printed books exported annually from the United Kingdom is nearly £150,000 ; of which about one-half is sent to India and the British colonies, one-fifth to the United States, and the remainder chiefly to France, Germany, Holland, and Italy. The amount of duty annually paid on foreign books imported is about £8000.

The chief seats of the foreign book trade are Paris, and Leipzig in Saxony, where all the German publishers have agents, and where the trade is likewise facilitated by two great book-fairs which are held annually, at Easter and Michaelmas. These fairs are frequented not only by all the booksellers of Germany, but by many of those of the neighbouring countries.

Books first composed, or written, or printed in the United Kingdom, and printed or reprinted in any other country, are prohibited from being imported for sale, except books not reprinted in the United Kingdom within twenty years, or being parts of collections, the greater parts of which had been composed or written abroad (3 & 4 Wm. IV., c. 50, § 58).

Books first composed, or written, or printed and published in the United Kingdom, and reprinted in any other country or place, may not be entered to be warehoused (*Ibid.* § 59).

The importation for private use of English books reprinted abroad is limited to a single copy for each party, accompanied by his luggage. (*Treasury Order*, *June* 29, 1830.) [COPYRIGHT.]

BOOK-DEBT, an expression employed to designate an obligation for the price of goods sold and delivered, when it is supported by no better evidence than the books of the seller. An entry made by a tradesman himself is not evidence in his own favour. If his shopman be examined as a witness, however, he may employ the entry as a memorandum to refresh his memory. Entries by a clerk or shopman are not in all cases evidence, but they may be admitted in certain circumstances. By a rule not easily to be accounted for, after the person who made the entry is dead, and when it is consequently difficult to get any explanation of the circumstances connected with it, it is better evidence than if he were alive, and capable of being examined on the subject. Mr Phillips, on this subject, says, "the entry in the tradesman's book ought to have been made by the shopman ; or, if not actually written by him, should at least appear to have been observed by him, soon after it was made, so as to enable him to speak to its correctness, and that the entry may be tantamount to one made by the shopman himself. If the shopman is living, he ought to be produced as a witness, that he may explain the circumstances and dealings on which the entry was founded. When he is examined, he may use the entry as a memorandum ; and the other party charged with the debt will then have an opportunity of examining into its correctness. If the person who made the entry was employed as shopman or clerk, to deliver goods, &c., and he is since dead, an entry made by him will be evidence, under certain restrictions. But proof of the handwriting of the clerk, and that he is gone abroad, and is not likely to return, has been held not to be sufficient to make such an *ex parte* memorandum admissible in evidence" (*Law of Evidence*, 7th edit. 264). A merchant's books will, in the general case, be very effectual evidence against himself.

IN ENGLAND, by statute 7 James I., c. 12, it is provided that no tradesman, or handicraftsman, shall be allowed to give his books in evidence of goods delivered or work done by him, after the expiration of a year from the date of the entry, unless he have in the mean time obtained a bill or obligation for the debt, or have brought his action within the year. The act does not apply to transactions between merchant and merchant. It proceeds on the preamble, that tradesmen were in the practice of producing accounts against individuals and their representatives, long after the transactions on which they were founded had been forgotten, and it is understood to have been passed in reference to a general belief, that after the expiry of a year, tradesmen's books *became* evidence, when they were not so before.

IN SCOTLAND, by statute 1579, c. 83, all book-debts, or accounts, by tradesmen and others, prescribe in three years. The period runs from the last entry in the account, so that if there be a new entry at any time within three years after an immediately previous one, the whole account is saved from prescription till three years after that entry. The prescription does not dissolve the obligation to pay—it merely limits the proof to two descriptions of evidence—a writing by the debtor, and an appeal to his oath. If, in the latter, the debtor admit the constitution of the obligation, he will not be relieved unless he specifically swear to its payment.

BOOK-KEEPING is the art of recording financial facts in a lucid and systematic manner. The only method of book-keeping founded upon general principles is the *Italian*, or, as it is more commonly called, the *Double-Entry* system, from its being based on the principle, that every transaction in business is virtually a transfer between two accounts, and so must be entered to the debit of the one, and the credit of the other. " Of the efficiency of this system, the trading world in its infinite variety of commerce and concerns gives unanimous evidence. Into every well regulated manufactory,—into every extensive mercantile establishment in every part of the civilized world,—it has gradually, but peremptorily, forced its way; and in this country is finding its way into mercantile establishments of humbler grades. The revenues of no government have been safely administered,—the accounts of no government have been intelligibly kept,—the business of no government has been promptly and satisfactorily despatched,—until the commercial system has been introduced with its order and uniformity into the different departments" (*Parliamentary Report on Excise Accounts*, 1834).

In the present article it is proposed to give—I. An outline of the ordinary procedure in recording the transactions of a general merchant;—II. Practical directions for stating the different accounts;—and III. A short account of a modified system adopted for retail business; premising the following general rules:—

Record nothing but facts.

Record facts under their date of occurrence.

Record them under their proper heads of account.

Facts of the same character are to be represented by addition; facts of different characters by opposition; but the result of two different species of facts is never to be represented by their difference.

I. *Outline of the ordinary procedure in recording the transactions of a general merchant.*

The double-entry system, according to the practice of most commercial establishments, comprehends three different kinds or classes of books:—1*st*, *Primary Records*, or Day-books, for each distinct branch of business—as Cash, Bills, Invoices Inward, Invoices Outward, Sales on Commission, and so on, according to the nature of the trade, and in each of which the transactions are stated circumstantially as they occur. 2*d*, The *Journal*, in which all the entries in the primary records are collected and digested monthly in a concise technical form, suited for their being readily transferred into the ledger. 3*d*, The *Ledger*, in which the results shown in the journal are arranged under their appropriate heads; and the periodical abstract of which, termed a *Balance Sheet*, exhibits in a succinct form the state of the merchant's affairs.

PRIMARY RECORDS.

CASH BOOK.—This, though the most important of all, is in its form the most simple. On the left-hand page, or Dr. side, are entered in chronological order all the sums received; and on the right-hand, or Cr. side, in the same order, all the payments. As no money can be paid that has not been first received; it follows that the Dr. side of a cash-book can never amount to less than the Cr. side; the excess of the former above the latter, if any, must, when correctly kept, also correspond with the money in hand.

BILL BOOKS.—Bills are either *receivable* or *payable*; the former being one of the channels through which debts due to the concern are collected, the latter one of the channels through which debts due by the concern are discharged. Each description has generally a book allotted to itself, both of which should contain spaces for all particulars inherent and relative to the bill.

The *Bills Receivable* book should contain appropriate spaces for the following particulars: No.—When received—On whose account—Cr. folio—From whom received—Drawer—Drawee—To order of—Where payable—Date—Term—When due—Sum—When and to whom paid away—Dr. folio.

The *Bills Payable* book should contain spaces under the following heads: No.—When accepted—On whose account—Dr. folio—Holder—Drawer—To order of—

Where payable—Date of Bill—Term—When due—Sum—When and to whom paid —Cr. folio.

Both books, it will be observed, are furnished with columns for running numbers; which numbers are also written on the face of each bill respectively, and by this means it can be readily referred to and identified.

Invoice Book Inwards, or Bought Book, is a receptacle for bills of parcels, or accounts of goods purchased.—In some houses these accounts are copied at length in the order in which they are received; while others form this book of blue, or common blank paper, into which the original accounts are pasted.

Invoice Book Outwards is appropriated for an account of goods sold on credit at home, or exported abroad. This book being of great importance, should be kept with the utmost precision, and carefully verified before the sums are transferred to the journal and ledger. In extensive concerns, several books of this kind may be kept at the same time, the titles of which can be varied according to the nature of the business. Thus one may be appropriated for *Town department*, another for *Country department*, and a third for *Foreign department*.

Sales Book, or Factory Book, is generally appropriated to accounts of consignments. Each account commonly occupies two pages, a title being placed over both, stating the names of the goods, ship, and consigner. The left-hand page contains an account of the charges incurred, including brokerage, and commission: the right-hand page contains an account of the quantity, price, and amount of the goods sold, with the buyer's name, and the time of payment. The difference between this amount, and the charges on the other side, is the net proceeds for which the consigner receives credit.

Other books may be kept according to the nature of the business; as a Debentures Book, Insurance Book, &c.; and the common practice, as already noticed, is to set apart books for each distinct department of business. In some houses, however, a Waste Book, or Petty Journal, is appropriated for such occasional transactions as do not fall under any of the preceding heads.

These exhaust the authorities from which it is usual to compile the journal. There are, however, a variety of other books, kept in every counting-house, which do not commonly form part of the materials for the journal, such as the Warehouse Book, Letter Book, Account-Current Book, Account-Sales Book, Petty Cash Book, and Order Book. The Warehouse Book, kept in a similar way to the Factory Book, contains accounts for each parcel of goods belonging to the merchant's own stock, detailing the quantities received, their disposal, the charges incurred, and the quantities on hand. The use of the others is sufficiently pointed out by their names.

JOURNAL.

The journal, as already stated, is a monthly synopsis of all the transactions collected from the primary records, and digested under their appropriate heads of Debtor and Creditor. It usually contains,—1*st*, A column for the day of the month; 2*d*, A column for the folio of the ledger where each account is posted; 3*d*, A space for narrative; and, 4*th*, Two money columns. The rules for distinguishing Dr. and Cr. are to be inferred from the nature of the transactions and the accounts in the ledger. In personal accounts nothing is plainer than who are Dr. and Cr.; in actual business this is not only understood but felt. The following are the most general rules that can be given.

Whatever is *Received*, or the *Receiver* is *Debtor*.

Whatever is *Delivered*, or the *Deliverer* is *Creditor*.

The journal begins with the inventory of stock. Thus if the property of a merchant consist of Cash, £300; Bill No. 57, on P. Hill, due April 3, £500; Goods, £900; Debt due by Peter Gray, £200; Ship Minerva, £400: and his obligations, Bill No. 80, to P. Yates, due Jan. 6, £700; Debt due to Moses Ker, £600. The journal entries will be in this form:—

Sundries Dr. to Stock.

Cash, ...	£300
Bills Receivable—No. 57, P. Hill, due April 3,	500
Goods, ...	900
Peter Gray, ...	200
Ship Minerva, ...	400
	£2300

STOCK DR. TO SUNDRIES.

To *Bills Payable*—No. 80, P. Yates, due Jan. 6,	£700
To *Moses Ker*, ...	600
	£1300

The primary Records are journalized at the end of each month.

In journalizing the CASH BOOK, state

Cash Dr. to *Sundries* . . .	For all money received.
Sundries Drs. to *Cash* . .	For all money paid.

Specifying particulars, and classing items of the same kind together.

In journalizing the BILL BOOKS,

Bills Receivable Dr. to *Sundries* .	For all bills received.
Sundries Drs. to *Bills Payable* . .	For all bills accepted.

Setting forth names, numbers, and other necessary particulars.

In journalizing the INVOICE BOOK INWARDS,

Goods Account, Dr. to A B (the seller) .	For amount of goods purchased.

In journalizing the INVOICE BOOK OUTWARDS,

C D (the Person on whose account the invoice is sent) Dr. to *Sundries*.

To *Goods*	For amount of goods.
To *Charges*	For Shipping and other charges.
To *Commission*	For the Factor's Commission.
To *Insurance*	For Premium of Insurance.

The case here supposed is that of a consignment to order. When the transaction is an Adventure Outward, or direct sale, no Commission is charged.

In journalizing the SALES BOOK or FACTORY BOOK,

Sundries Drs. to *Sales on Commission*.

E F (the Purchaser) . . .	For Sales on Credit.
Cash	For ready money Sales.

Sales on Commission, Dr. to *Sundries*.

To *Charges*	For charges at landing, &c.
To *Interest*	For interest (if charged on advances).
To *Commission*	For the Factor's Commission.
To *G H* (the Consigner) . .	For Net Proceeds.

The journal for the month is then closed by a similar arrangement of the transactions contained in any other Record which the nature of the business may render necessary.

LEDGER.

This book is divided into distinct accounts, corresponding to the different branches of the business, into which are *posted* monthly the results brought out in the journal. Each account is introduced by an appropriate title; and articles of opposite kinds which belong to the same account, are placed on opposite pages. The left hand page is called the *Debtor*, or *Dr.* side of the account; and the right hand page the *Creditor*, or *Cr.* side. The difference between the sums of the Dr. and Cr. sides is called the *Balance*.

The accounts in the ledger may be divided into two great branches. The first forms the accounts of the whole property or capital, technically called *Stock*, and the second embraces the accounts of the component parts of property. Under the general head of *Stock Accounts* are comprehended *Profit and Loss* account, and its ramifications, *Commission*, *Interest*, and *Charges*; the object of these accounts being to collect together the individual augmentations and diminutions of capital, and to transfer the results in one general entry to *Stock*; and also *Private Account*, its use being to record all sums put into the business, or withdrawn, so as to keep them distinct from *Profit and Loss*, and to transfer the result in the same manner in one entry to *Stock*. The accounts of the component parts of property will depend upon the nature of the business; but in a general point of view, the whole may be conveniently arranged as follows :—

1. Whole Property.

	Branches.	*Ramifications.*
Stock.	Profit and Loss.	Commission. Interest. Charges.
	Private Account.	

2. Component Parts of Property.

Accounts of Money, Real Property, &c. viz. Cash, Bills Payable, Bills Receivable, Goods, Ships, Houses, Public Stock, &c.
Personal Accounts, viz. Banker, Ordinary Debtors and Creditors.

As by the fundamental law of double entry, every debit must have a corresponding and equivalent credit, and *vice versâ*, it follows that the two sides of the ledger must, if correctly posted, be constantly in a state of equilibrium : It follows likewise from the axiom that "the whole is equal to the sum of all its parts," that the balance of the stock account must equal the aggregate balance of all the other accounts. Hence arises the proof of double entry, which consists in abstracting the balances of all the accounts in the ledger, and verifying their accuracy by ascertaining how far the above requisites have been fulfilled. This operation, called *balancing the books*, is usually performed at the close of the year; at which period, likewise, the gain or loss during the year is indicated by the credit or debit balance brought into "Stock Account" from "Profit and Loss," after transferring to the latter its branches, Commission, Interest, &c., and the differences betwixt the debit and credit sides of the goods and property accounts, after crediting the balances of merchandise and property on hand at their market value. The whole debit and credit balances being then arranged in opposition to each other, will give a condensed view of the merchant's assets and liabilities, and of his capital stock in the following form :—

Dr. Balance Account. Cr.

Cash in hand	£56	Bills Payable	£1,500
Bills Receivable do.	463	Debts Payable	2,500
Goods, do.	3,500		
Ships	1,000		£4,000
Houses	800	*Stock* or net capital	6,000
Stock in the Public Funds	400		
Banker	900		
Debts Receivable	2,881		
	£10,000		£10,000

II. *Practical Directions for stating the different Accounts, including Observations upon Joint Accounts.*

Stock.—This is in truth the account of the merchant himself, or the concern; and in commencing a new set of books, is debited with all the liabilities, and credited with all the assets. Thus the sums given above under the head "Journal," will be entered in the ledger in this form :—

Dr.	Stock.		Cr.
To Sundries . . .	£1300	By Sundries . . .	£2300

The excess of the credit above the debit side, £1000, being the net capital or stock in trade. If at next balance it shall be found that a profit of £300 has been realized, while £200 has been withdrawn for private expenses, *Stock* will fall to be credited "By 'Profit and Loss' £300," and debited "To 'A B's Private account,' £200." After which the balance at Cr. of 'Stock,' or A B's net capital, will be £1100.

Profit and Loss.—During the currency of the year, this account should be debited solely for actual losses, and credited for actual gains; leaving the balances of Commission, Interest, Charges Account, &c. to be transferred at the time fixed for balancing. Some houses amalgamate the whole of these accounts into one general Profit and Loss account; but this is objectionable, especially in large concerns, where it is of importance to preserve all the channels of gain and loss as distinct as possible. A better plan is to open a separate account for Profit, and another for Loss.

The balance arising on Profit and Loss account is transferred "To Stock," or "By Stock," according as the result is gain or loss.

Commission Account is credited for all commissions received for our trouble in transacting business for others. There are seldom any entries to the debit, as the charges for commission made by our agents properly belong to the Goods Account to which they have reference. It is closed by transferring the balance to "Profit and Loss."

Interest Account contains on the Dr. side all sums paid or incurred for interest or discount; and on the Cr. all sums received or become due for the same. The difference, at balancing, is transferred to "Profit and Loss."

Charges Account contains on the Dr. side all general expenses paid or incurred in the business, as rents, taxes, salaries, postages, and incidents. If any of these should be afterwards charged to some other account, the sums so charged are entered to the Cr. The balance is transferred to "Profit and Loss."

In some houses, separate accounts are kept for Export Charges, Charges on Sales, on Commission, &c., such accounts being dissected periodically, and credited by the different parties, or Adventures, for which the charges were incurred.

Private Account contains on the Dr., money, or any thing else withdrawn from the concern for private use. It seldom contains any thing on the Cr. side. The balance is transferred to "Stock." Dr Hamilton and other writers carry private or house expenses to "Profit and Loss;"—but this is improper, as the true profits of business may be £1000 a-year, while the expenditure being £1500, a false loss would be exhibited.

Cash.—Some houses post the ledger directly from the Cash Book, without any intermediate entry in the Journal beyond "Cash Dr. to Sundries" for the monthly amount of receipts; and "Sundries Dr. to Cash" for the monthly amount of payments; but the more general method in large concerns is that described above under the head "Journal." By both plans, the cash account in the Ledger is usually comprised in twelve lines on each side yearly.

The mode of stating the cash details is simple. When goods are sold for ready money, Dr. "Cash," Cr. "Goods," or account to which the goods belong. When cash is received for goods formerly sold on credit, Dr. "Cash," Cr. the purchaser. When goods are bought for ready money, Cr. "Cash," Dr. "Goods," or account to which the goods belong. When cash is paid for goods purchased on credit, Cr. "Cash," Dr. the seller. When money is received of one person for the use of another, or for his own use, Dr. "Cash," Cr. the person for whose use it is received. When money is paid to one person for the use of another, or for his own use, Dr. the person for whose use it is paid, Cr. "Cash." When money is lent, Cr. "Cash," Dr. the borrower. When money is borrowed, Dr. "Cash," Cr. the lender. When a bill is paid, Cr. "Cash," Dr. "Bills Payable." When a bill is discounted, Dr. "Cash," and Cr. "Bills Receivable" for the total amount of the bill; and Cr. "Cash," and Dr. "Interest," for the discount.

Bills Payable Account is credited with all bills accepted, and debited with those paid; the balance shows the amount of bills unpaid.

Bills Receivable.—This account is debited with all bills received, and credited with those paid, discounted, or otherwise disposed of; the balance shows the bills remaining in hand.

In the *Renewal of Bills*,—1*st*, If the bill be in your own hands, make A B (the acceptor) Dr. to Sundries; viz. To "Bills Receivable," for the sum of the old bill; To "Interest," for interest for the time the bill is renewed added to the new bill; and then "Bills Receivable" Dr. to A B for the new bill. 2*d*, If the bill be discounted, or paid away, make A B Dr. to "Cash" when you pay his bill,—and A B Dr. to "Interest" for interest: then "Bills Receivable" Dr. to A B for the new bill. If the new bill, however, be drawn for the same sum as the former, and the interest paid in cash, it is sufficient to enter "Cash" Dr. to "Interest" for the interest, without bringing it to A B's account.

In the *Protesting of Bills*,—1*st*, If the bill be in your own hands, make A B (on whose account it was received) Dr. to "Bills Receivable" for the bill, and A B Dr. to "Cash" or "Charges," for expenses of protest; 2*d*, If the bill be discounted or paid away, A B Dr. to "Cash," paid his bill with expenses.

Accommodation Bills.—When you receive another person's acceptance, or grant your own note and receive the proceeds, in either case merely for your own accommodation, enter "Bills Receivable" Dr. to "Bills Payable" for the bill (as you will have to provide for it when it falls due); and when discounted, "Cash" Dr. to "Bills Receivable," and when paid, "Bills Payable" Dr. to "Cash." When you grant your bill to another, merely for his accommodation, it is sufficient to note the particulars in a "Memorandum Book," or "Register Bill Book," and take an obligation from him that he is to provide for it when it becomes due. If he then be unable to pay the bill, enter A B Dr. to "Cash." Where, however, accommodation bill transactions betwixt two parties are numerous, the best way is to open a separate account for them.

Merchants whose bill transactions are numerous, keep a *Register Bill Book*, in which all bills they receive, or become bound to pay, are entered in the order in which they fall due, to enable them to regulate their payments without embarrassment.

Goods Account commences on the Dr. side, with the balance of goods on hand. Goods bought are entered on the same side; and goods sold on the Cr. Charges laid out on goods are entered on the Dr. side, as also discounts allowed on goods sold; and on the Cr. side discounts received on goods purchased, as well as any other incidental advantage which arises from them. On closing the account, Cr. By "Balance" for value of goods on hand. If the Cr. side is then found to exceed the Dr. the account is to be debited, To "Profit and Loss" for gain; and, if the contrary, it is to be credited By "Profit and Loss" for loss. In some houses, separate accounts are opened in the Ledger for each kind of goods; but perhaps the more general practice is to open only one general account, and leave the gain or loss upon the different parcels to be ascertained from the Warehouse Book.

Accounts of Ships, Houses, &c. are debited with the cost and outlays, and credited with freights, rents, and other receipts. The difference is transferred to "Profit and Loss," after crediting them "By Balance" for their value at the time of closing.

Personal Accounts are debited to Goods, Cash, Charges for Commission, and for every thing we give out; and credited for what we receive either in Goods, Cash, or Charges, &c. Where the transactions with a party are numerous, and of different kinds, several accounts may be opened; thus with A B you may open his "General Account," his "Accepting Account," his "Account of Consignments," &c., the balance of all, or any of these, being transferred at certain periods to his "Account Current."

Insurance Account is stated in various ways, according to circumstances. In the books of a merchant, or person insured, it is debited to the Broker or Insurance Company, for the amount of premium and policy, and credited by the Adventure or person for whose account it is effected; the Broker being debited for Returns, Averages, or Losses, to the accounts that were formerly charged with the premiums. Where, however, the merchant acts as his own broker, it will be convenient to open a separate set of Insurance books for the accounts of the different underwriters, &c., and to reserve his general ledger for an Insurance Account, and an account for himself as "Broker," both of which will be stated, as in the former case.

In the books of an Underwriter, "Insurance Account" is credited by the broker or party insured for the premium, &c.; and debited to the same accounts for Returns, Averages, or Losses; the difference being transferred at balancing to "Profit and Loss." At balancing, care must be taken to transfer the premiums on current risks to a "Suspense" or "Guarantee Account."

Debenture Account is debited To "Goods" for the drawbacks to be received on goods exported from our own stock, and credited by "Cash" when we receive the same; the balance shows the debentures outstanding.

Goods Received on Commission.—Separate accounts are sometimes opened in the ledger for each consignment; but as this is done in the Sales or Factory Book, it is usual to confine the ledger accounts to two general ones, namely, "Sales on Commission," and "Charges on Sales on Commission." The first is credited by the accounts of the different purchasers for the gross sales; and debited (after each consignment is sold) to "Charges on Sales on Commission" for the amount of charges, to "Commission" for your commission, and to the consigner for the net proceeds; and the balance will consist of the gross proceeds of goods not yet accounted for by you. "Charges on Goods on Commission" is debited to "Cash," &c. for all charges, and credited as already stated: the balance will show the amount of advances remaining to be accounted for to you.

Adventures.—In *Adventures Outward*, two accounts are generally opened with the foreign agent, "A B Account of Consignments" is debited with the cost of the goods, Insurance, and Charges; and credited by "A B Account-Current" for net proceeds; the difference being carried to Profit and Loss. The account-current is credited by remittances. In *Adventures Homeward*, the foreign agent's account is credited by "Goods," or as the case may be, for the amount of invoice and charges; and debited with remittances.

Consignments by you to parties in this country are stated in the same manner as in Adventures Outward.

Joint Adventures may be stated in various ways. If A and B ship goods conjunctly to Bombay, to the value of £300; of which, £210 are from A, and £90 from B; and the net proceeds realized by Z be £400; the accounts may be stated in this form in A's books, supposing him to be manager, and the profits divisible equally.

Dr. Adventure to Bombay in $\frac{J}{A}$ with B.			Cr.
To Goods . .	£210	By B his ½ cost	£161
To B	90	By Z my ½ net proceeds .	200
To Insurance . .	12		
To Charges . . .	10		
	322		
To Profit and Loss	39		
	361		361

Dr.		B	Cr.
To Adven. his ½ cost	£161	By Adven. &c.	£90
To Balance . .	129	By Z his ½ net proceeds .	200
	290		290

Dr.		Z	Cr.
To Adven. &c.	£200	By Balance .	£400
To B	200		

The balance of £129 is paid to B, on the £400 being remitted by Z. The adventure may also be stated by A as though it were his own entirely, giving credit to B for his goods, and half the profit.

Branches.—Concerns which have branch establishments should open accounts with each precisely as if they were strangers.

Foreign Money Accounts.—If an account with a foreigner is to be settled in foreign money, we must enter the value of each article reduced to that money in an inner column. If the sums of the inner columns be equal, there is nothing due by the one party to the other; and then, if the sums of the outer columns be unequal, the difference is gain or loss. But if the inner columns be unequal, the balance due from one party to the other must be valued at the current rate of exchange; and after the value is added to the proper side, the difference is gain or loss.

Bad Debt Account is debited to "A B," &c. for bad debts incurred, and credited by "Cash" for dividends, &c., and by "Profit and Loss" for the net loss sustained at the period when the debtor is discharged, or the recovery of his debt has become hopeless.

A preferable mode of disposing of bad debts is to open a "Guarantee Account," and credit it at the period of balancing by "Profit and Loss" for the probable amount of loss by bad or doubtful debts. In this case, the debtor's own accounts are credited for dividends, &c., and afterwards by "Guarantee Account" for net loss. At each succeeding period of balance, a new valuation of bad debts is to be made, and an additional sum credited by "Profit and Loss," if found requisite.

Any other contingency may obviously be provided for in Guarantee Account on the same principle.

Partnership Accounts may be kept in the general ledger in six different ways, namely;—three in which no entries are made until the partners advance their shares; and three in which entries are made previous to the shares being paid in: in the latter an "Account Proper" being opened with each partner, for recording the sums drawn out or paid in, distinct from the "Account in Company" for his share.

1. *Cash*, or the *Article* advanced *Dr. to Stock*, —then
   Stock Dr. to Sundries.
   To each partner for his share.
2. *Sundries Drs. to the Partner.*
   For the articles paid in.
3. *Sundries Drs. to Stock in Company.*
   For the articles paid in, mentioning each partner's share.
4. *Stock Dr. to Sundries.*
   To each partner's *Account in Company*, for his proposed capital,—then
   Sundries Drs. to Stock.
   Each partner's *Account Proper* for the same.
5. Each partner's *Account Proper* Dr. to each partner's *Account in Company*, for the capital to be advanced.
6. *Sundries Drs. to Stock in Company.*
   Each partner's *Account Proper* for the proposed capital—and

when the partners pay in their respective shares, the entry by all the three last is "Cash" or the Article advanced Dr. to partners' Account Proper. At balancing the books, if the business has been successful, and the profit is to be divided, enter "Profit and Loss" Dr. to each Partner's Account Proper, but if there has been a loss, these entries are to be reversed. The balance of the Account Proper is then usually transferred to the Account in Company when the latter is kept separate, and it is not fixed that the capital shall remain permanent. In all cases, interest is to be charged on the partners' accounts, in order to equalize their advances.

A preferable mode, however, is to state the accounts in the General Ledger precisely as in the case of a single proprietor, and to adjust the partnership interests in a private Partnership Ledger as follows:—

Dr.	Joint Capital.		Cr.
To Sundries	£900	By A, withdrawn	£210
To Interest	37	By B do.	105
To P. & L.	300	By balance	922
	£1237		£1237

Dr.	Interest.		Cr.
To Sundries	£37	By Joint C.	£37

Dr.	Profit and Loss.		Cr.
To Sundries	£300	By Joint C.	£300

Dr.	A.		Cr.
To Jt. C. withdrn.	£210	By Joint C.	£600
To Balance	615	By Interest	25
		By P. & L. ⅔ gain	200
	£825		£825

Dr.	B.		Cr.
To Jt. C. withdrn.	£105	By Joint C.	£300
To Balance	307	By Interest	12
		By P. & L. ⅓ gain	100
	£412		£412

Joint Capital is debited at the outset to each of the partners for his capital; at balancing it is debited to "Interest" for the interest arising on the capital; to "Profit and Loss" for gain; and credited by each of the partners' accounts for the sums withdrawn. It is thus just the Stock Account of the General Ledger reversed.

Interest is credited by "Joint Capital" for the interest arising on it; and debited to the partners for their respective shares.

Profit and Loss is credited by "Joint Capital" for net gain; and debited to the partners' accounts for their respective shares.

Partners' Accounts are credited by "Joint Capital," "Interest," and "Profit and Loss," for their respective shares of capital, interest, and gain, and debited to "Joint Capital" for the sums withdrawn.

III. *Outline of a Modified System adapted for Retail Business.*

It is a common prejudice that the retailer, from the minuteness of his sales, is unable to keep his accounts on the same systematic principles as the merchant. The difficulty, however, applies solely to the quantities of goods, and in no respect to the money accounts which, in all businesses, are composed of expenditure and returns, receipts and payments. These particulars the retailer can ascertain as easily as the merchant, and therefore he may with equal facility systematize his accounts. In the simple form given below, the only books employed are a Cash Book, a Day Book, and a Ledger into which the two former are posted directly without the intervention of a Journal.

The *Cash Book* differs from ordinary books of this kind in having an inner column on each side titled "Store." In the inner column on the Dr. side are entered the cash drawn for ready-money sales and discounts received; and in the credit inner column, ready-money purchases, discounts allowed or paid, and all charges of a general nature. The amount of each of the inner columns is transferred monthly to the outer, and then posted to "Store Account" in the Ledger.

In the annexed form the ready-money sales are entered weekly, but in practice they should be entered daily unless a petty cash book is kept for that purpose; in which case they may be transferred when convenient.

The *Day Book* forms a chronological record of all the other transactions: the purchases on credit are extended into the column titled "Store Dr.;" the sales on credit to that titled "Store Cr.," and any other transactions which may occur are expressed in the journal form, and entered in an inner column. The two outer columns are summed monthly, and their amounts posted to "Store Account," as before.

The *Ledger* is extremely simple, and will be readily understood on inspection. The Store account combines a goods and charges account; and at closing, the value of the goods on hand, as ascertained by inventory, is stated to the credit as a balance, and the excess of the credit above the debit side, being the profit realised, is transferred to Stock account.

The period embraced by the transactions is one month, but the procedure is the same throughout the year. The operation of balancing is here for illustration performed at the end of the month, when the closing stock entries are stated in the journal form at the end of the Day Book.

CASH BOOK.

Dr.		Store.				Store.	Cr.
Feb. 1.	To Stock - - - £	..	500	Feb. 1.	By Bank, lodged - £	..	285
.. 7.	To Store, cash sales -	15		.. 3.	By Store, 200 lbs. tea, at 4s.	40	
.. 8.	To Store, disct. from J. Smith	10		.. 8.	By J. Smith, paid him -	..	200
.. 14.	To Store, cash sales -	16		.. 13.	By A B, family expenses	..	5
	To J. Bell in full -	..	12	.. 14.	By Store, discount to J. Bell	1	
.. 21.	To Store, cash sales -	12		.. 25.	By Store, disct. on P. B's bill	1	
.. 25.	To Bills Receivable, discounted			.. 28.	By Store, incidents, &c. -	12	
	P. Brown's, due			.. ..	By A B, family expenses	..	6
	June 18 - - -	..	60				54
.. 28.	To Store, cash sales -	14			By Balance - -		89
			67			..	
			639				639

DAY BOOK.

			Store. Dr.	Store. Cr.
Feb. 2.	To John Smith, for 1000 lbs. tea, at 4s. - - - - - -	£	200	
.. 5.	By J. Bell, 48 lbs. tea, at 5s. - - - - - - - - -		..	12
.. 10.	To J. Smith, 100 cwt. sugar, at 50s. - - - - - - -		250	
.. 15.	By J. Bell, 20 cwt. sugar, at 60s. - - - - - - -		..	60
.. 20.	Bills Receivable, Dr. to J. Bell			
	Received his bill at 4 months, due June 18 - - - - -	£60		
.. 28.	By J. Bell for 4 lbs. tea, at 5s. - - - - - - - -	£ 1		
	40 lbs. sugar, at 6d. - - - - - - -	1		
				2
	Store Account, Dr. for purchases on credit this month - - - -		450	
	Store Account, Cr. for sales on credit this month - - - -		..	74
	Stock Dr. to A B Private Account, balance of latter transferred -	£11		
	Store Account Dr. to Stock, gain on former transferred - -	£21		

LEDGER.

Stock.

Dr.					Cr.
Feb. 28.	To A B for cash withdrawn -	£11	Feb. 1.	By Cash for capital -	£500
.. ..	To Balance - - - - -	510	.. 28.	By Store for gain - -	21
		£521			£521

Store.

Dr.					Cr.
Feb. 28.	To Cash - - - - -	£54	Feb. 28.	By Cash for sales, &c. -	£67
.. ..	To Sundries, per Day B. - -	450	.. ..	By Sundries, sales per Day B.	74
.. ..	To Stock for gain - - - -	21	.. ..	By Balance, goods on hand	384
		£525			£525

Bank.

Dr.					Cr.
Feb. 1.	To Cash lodged - - -	£285	Feb. 28.	By Balance - -	£285

Bills Receivable.

Dr.					Cr.
Feb. 20.	To J. Bell, due June 18 - -	£60	Feb. 25.	By Cash, discd. J. Bell's bill	£60

A B Private Account.

Dr.					Cr.
Feb. 13.	To Cash, family expenses - -	£5	Feb. 28.	By Stock transferred -	£11
.. 28.	To ditto - - - - -	6			

—— John Smith. ——

Dr.				Cr.	
Feb. 8.	To Cash, discount £10 - -	£200	Feb. 2.	By Store, 1000 lbs. tea, at 4s...	£200
.. 28.	To Balance - - - -	250	.. 10.	By Store, 100 cwt. sug., at 50s.	250

—— J. Bell. ——

Dr.				Cr.	
Feb. 5.	To Store, 48 lbs. tea, at 5s. -	£12	Feb. 14.	By Cash, discount £1 -	£12
.. 15.	To Store, 20 cwt. sugar, at 60s. -	60	.. 20.	By Bills Rec^{ble}., due June 11	60
.. 28.	To Store, tea and sugar - -	2	.. 28.	By Balance - -	2
		£74			£74

—— Balance. (A B's Estate, Feb. 28.) ——

Dr.		Cr.	
To Cash on hand - - -	£89	By J. Smith, due to him	£250
To Store, goods on hand - -	384	By Stock - -	510
To Bank - - - -	285		
To J. Bell, due by him - -	2		
	£760		£760

If the concern is a partnership, the accounts may be kept precisely as above, and the interests of the partners adjusted in a private ledger, according to the form given in last section. In this ledger should also be engrossed the Inventory and Valuation of Stock, and the Balance Account.

BORACIC ACID is obtained artificially by the action of sulphuric acid upon borax; and in a natural state in the hot springs of Sasso, near Florence, and in the Lipari islands. It occurs in small brilliant colourless crystals, which have a greasy feel: it is inodorous, and possesses little taste. This acid is used in the manufacture of borax, as well as in chemical investigations. About 6000 cwts. are annually imported into this country.

BORAX, a salt procured in an impure state, called *tincal*, or *rough borax*, from a lake in Thibet, about fifteen days' journey from Teeshoo Lomboo, from whence nearly the whole European market is supplied by way of Calcutta. Tincal, as imported, is embedded in a kind of soapy matter; its crystals are soft and brittle, colourless, yellowish or greenish, sometimes nearly transparent, but more commonly opaque. When purified, it is called borax, or *borate of soda*, and occurs in rather large white semitransparent crystals, having a sweetish alkaline taste. When heated, it becomes a porous friable mass, called *calcined borax*. Borax is also prepared artificially in England and France from its ingredients, boracic acid and soda. This salt is employed in medicine, but is chiefly used as a flux in the arts. About 1500 cwts. are annually brought to this country, nearly one-half of which is again re-exported.

BOTARGA, a substance similar to caviare, prepared on the coasts of the Mediterranean, from the spawn of a kind of mullet. It is very firm, of a deep reddish colour, and has two lobes about nine inches long. The best is made at Tunis.

BOTTLES (Du. *Bottels*. Fr. *Bouteilles*. Ger. *Bouteillen*. It. *Bottiglie; Fiaschi*. Por. *Botelhas*. Rus. *Bulülki*. Sp. *Botellas*.) [GLASS.]

BOTTOMRY is a contract by which money is borrowed on the joint security of a ship and its owners, repayable on the ship terminating her voyage successfully. It corresponds with *Respondentia*, which is a similar method of raising money on the cargo. [RESPONDENTIA.] It may be executed either by bill on the part of the borrower, or by a mutual bond, provided the conditions be clearly expressed. At home, the contract is entered into by the owners, or by the master as their agent. The master has full authority in a foreign country to bind the owners, and hypothecate the ship and freight by a bottomry-bond, in cases of necessity. "If it be made," says Mr Smith, "by the owners themselves in this country, before the commencement of the voyage, the lender has not the same convenient remedy by suit in the Admiralty against the ship, as he has in the case of hypothecation for necessaries by the master in a foreign port, and if the contract refer to a British ship, of which it purports to be an assignment, compliance with the provisions of the Registry Act seems necessary to its validity" (*Mercantile L.* 348). In Scotland, according to Professor Bell, "to make the debt effectual, the proceedings are in Admiralty [now the Court of Session] by an application for the sale of the ship, and payment of the bottomry debt, or a warrant against those who owe freight." The bond may be granted not only for money lent, but for repairs executed. The holder of the bond may take any amount of interest without being liable to the usury laws, a privilege of less consequence than it formerly was. [USURY.] But this privilege continues with the sea risk—when that ceases, the interest, which continues to run, is restricted to the ordinary rate. Where the master hypothecates the ship for interest exceeding 5 per cent., the lender has a personal claim against the master, but none against the owner. Where there are several bonds of bottomry, and the value of the ship is insufficient to meet them all, the last, if absolutely necessary, is preferred, as having had the chief tendency to the preservation of the vessel. (*Abbott*, 117-131. *Marshall on Insurance*, 742-769. *Smith's Mercantile L.* 346-351. *Bell's Com.* i. 530-536.)

BOUGHT-AND-SOLD NOTE. [BROKER].

BOUNTY, a premium given by a government for the encouragement of a particular branch of industry. The granting of bounties formed, until lately, a prominent feature of the commercial policy of this country. A graduated allowance per yard was paid on all linen exported, in order to encourage the home manufacturer, and enable him to meet foreign competition; four shillings were granted on each barrel of cured gutted herrings; and £1 per ton on every vessel fitted out for the whale-fishery, in order to promote the fisheries and the rearing of seamen. Encouragements were given to other trades on similar principles; and in 1824 the total sum paid under this head amounted to £536,228. The impolicy of bounties had by this time, however, been rendered evident by the writings of Smith and Ricardo. It was now acknowledged that individual interest is of itself sufficient to prompt men to engage in all trades of a really advantageous nature;—that the production and exchange of commodities fall into the most profitable channels when left to themselves; and that as often as they are diverted from those channels by external interpositions of any sort, so often the industry of the country is made to employ itself less advantageously, and those engaged in it rendered comparatively indifferent to improvements. The principle of bounties was accordingly abandoned by government. The tonnage duty paid on whale ships ceased in 1824; and the bounties on herrings, linen, and other articles were repealed in 1830.

"We cannot give our workmen a monopoly in the foreign as we have done in the home market. We cannot force foreigners to buy their goods as we have done our own countrymen. The next best expedient it has been thought therefore is *to pay them for buying*. . . . . . . Bounties, it is allowed, ought to be given to those branches of trade only which cannot be carried on without them. But every branch of trade in which the merchant can sell his goods for a price which replaces to him, with the ordinary profits of stock, the whole capital employed in preparing and sending them to market, can be carried on without a bounty. . . . . . Those trades only require bounties in which the merchant is obliged to sell his goods for a price which does not replace to him his capital, together with the ordinary profit; or in which he is obliged to sell them for less than it really costs him to send them to market. The bounty is given in order to make up this loss, and to encourage him to continue or perhaps to begin a trade of which the expense is supposed to be greater than the returns, of which every operation eats up a portion of the capital employed in it, and which is of such a nature that if all other trades resembled it there would soon be no capital left in the country. The trades which are carried on by means of bounties are the only ones which can be carried on between two nations for any considerable time together, in such a manner as that one of them shall always and regularly lose, or sell its goods for less than it really costs to bring them to market. But if the bounty did not repay to the merchant what he would otherwise lose upon the price of his goods, his own interest would soon oblige him to employ his stock in another way, or to find out a trade in which the price of the goods would replace to him, with the ordinary profit, the capital employed in sending them to market. The effect of bounties, like that of all the other expedients of the mercantile system, can only be to force the trade of a country into a channel much less advantageous than that in which it would naturally run of its own accord." (*Wealth of Nations*, book iv. chap. v.)

BOURBON, an island in the Indian Ocean subject to France. It lies about 90 miles S.W. from Mauritius, and is 440 miles E. from Madagascar. Area 895 British square miles. Population in 1836, 106,099, of which 69,296 were negro slaves. The chief town and port is St Denis, situated on its northern side, in 20° 50′ S., and 55° 31′ E.; pop. 12,000. It possesses no close harbour, but only an open and dangerous roadstead.

The island consists of the heights and slopes of two mountains, the most southerly of which contains a volcano in perpetual activity. A great part of the interior is a volcanic desert; but the districts on the coast are generally fertile. The climate though humid, is pleasant and salubrious; hurricanes are, however, frequent and violent. The staple product for exportation is sugar; there are also extensive plantations of coffee and cloves. The forests abound in a variety of fine timber and dye-woods; and ambergris, coral, and turtle, are found on the shores. The total value of articles exported in 1836, of the growth and produce of the island, was 16,743,899 fr. (or £669,756); the principal being raw sugar, 18,173,092 kilogrammes, value 12,721,164 fr.; coffee, 990,013 kilogrammes, value 1,386,018 fr.; cloves, 556,650 kilogrammes, value 1,403,575 fr. In the same year the total value of the imports was 13,769,541 fr. (or £550,782), consisting chiefly of cottons and other manufactured goods, with rice, wheat, oils, wine, cattle, timber, and salt. The principal commercial intercourse is with France, where the bulk of the produce of the island is exchanged for manufactured articles,—Madagascar, to which French manufactures are sent in exchange for cattle, &c.,—India, to which cloves and other articles are sent in return for rice,—and the neighbouring island of Mauritius.

Measures, Weights, and Money, same as FRANCE.

Revenue in 1837, 2,149,563 fr., or £85,962; expenses, 2,932,428 fr., or £117,297.

BOX (Fr. *Buis*), a small tree (*Buxus sempervirens*), now very scarce in this country, but common in the south of Europe and west of Asia. Its wood, which is unique and highly valuable, is close, hard, heavy and durable, of a yellowish colour, cuts better than any other, and is the only kind adapted for engraving. It is also used for the wooden part of fine tools, snuff-boxes, and for a variety of purposes requiring strength, beauty, and polish, in timber. A late reduction of the duty from £5 to 10s. per ton (6 & 7 Wm. IV. c. 60), has led to a greatly increased consumption of boxwood, and about 700 tons are now annually imported, chiefly from Turkey and Spain.

BRACCIO, an Italian cloth measure, varying in different places from about 21 to 26 imperial inches.

BRAN, the husks of ground corn.

BRANDY (Fr. *Eau de vie de vin*. Ger. *Brantewein*. It. *Aquarzente*. Por. *Aguardente*. Sp. *Aguardiente*), a spirit distilled from wine, and from the *marc*, or fermented residue of pressed grapes. In general it is obtained from wine of inferior quality, fit only for making brandy. The product of the distillation is at first colourless, but it obtains a certain degree of colour by age. Most commonly, however, it is coloured artificially by mixture with burnt sugar and saunders-wood. The quality is of course dependent both on the material from which it is procured, and the skill with which it is manufactured. Marc brandy is said to possess a more acrid flavour than that obtained from wine.

Brandy is manufactured in most wine countries, but the best, and almost the only kind imported into Britain, is made in France. The quantity annually prepared in that country is estimated, though somewhat vaguely, at about 20,000,000 galls., of which nearly one-third is exported. The finest, made at Cognac, in the department of Charente, is said to be procured from white wine fermented so as not to become impregnated with the oil of the grape skin. The Cognac brandy is shipped mostly from the port of Tonnay on the Charente; but brandy forms likewise a valuable export from Cette, Bordeaux, Rochelle, and Nantes. Besides the British, the Anglo-Americans and Dutch take considerable quantities of it; but the exports to other countries are comparatively trifling. That exported from Spain is shipped chiefly at Barcelona for Cuba, Mexico, and the South American States.

The extravagant duty of 22s. 6d. per gallon levied on foreign spirits has materially checked the use of brandy in this country; indeed the quantity at present entered for home consumption is much less than it was fifty years ago. In 1790, when the duty was 6s. the annual consumption was about 1,700,000 gallons (Imp. meas.). At present, although it has somewhat increased of late years, it averages only about 1,400,000 gallons annually. A considerable quantity, however, is besides introduced in an irregular manner, as a contraband trade is carried on with activity along the coast of the Channel.

In 1836, the quantity of brandy imported amounted to 2,396,135 Imp. galls. (including overproof), of which 2,300,122 galls. were from France; the quantity entered for home consumption was 1,203,435 galls.; and the quantity re-exported to 1,010,851 galls. (proof). Of the latter, there were sent to British America, 281,609 galls.; British West Indies, 215,531 galls.; Cape of Good Hope, 89,383 galls.; United States, 57,514 galls.; East Indies, 105,173 galls.; and Australia, 122,104 galls.; besides smaller quantities to the West Coast of Africa, to the South American States, especially Chili and Peru, to the Canaries, and to other places. The quantity under bond in this country is usually about 1,300,000 galls.; and that in the stocks of dealers about 500,000 galls. [SPIRITS.]

BRANK. [BUCK-WHEAT.]

BRASS, an important alloy of copper and zinc, usually prepared by cementation of calamine, a native carbonate of zinc, with granulated copper. Sometimes blende, a native sulphuret, is employed instead of calamine. It is of a fine yellow colour, susceptible of a high polish, and is little liable to rust. It is very malleable, and ductile when cold: at a high temperature it is brittle. Sp. gr. 7·8 to 8·4. It is more fusible, sonorous, a worse conductor of heat, and harder than copper. The relative proportions of the two metals vary in the different kinds of brass; but there is seldom less than one-ninth, or more than one-fourth of zinc. Brass has been known and used from the earliest ages. Its colour and other properties recommend it in preference to copper for many purposes in the arts, and it is extensively employed both for useful and ornamental purposes. From being readily turned on a lathe, it is well adapted for philosophical instruments, and those used in manufacturing processes. It is besides used in the manufacture of a great variety of articles, such as buttons, chandeliers, lamps, vases, fenders, fire-screens, and lock and door handles. When drawn into fine wire, it is extensively employed in pinmaking, and for other purposes. It is also beaten into thin leaves, which, under the name of *Dutch leaf* or *Dutch gold*, are used in making trinkets (*Brande's Chemistry*, *&c.*). The great seat of the brass manufacture is Birmingham.

"The use of this valuable compound metal has continually increased during the last hundred years, and the talent of the designer has been tasked in the invention of new forms, and in the adaptation of classical models to the purposes of modern domestic comfort and ornament. The introduction of the *stamp* especially, which was first applied to the multiplication of copies of smaller wares, as buttons, buckles, and cloak pins, and which was at length adapted by increasing its power, to the production of large *forms*, has caused the greatest change in this branch of manufacture. The process of casting, though preferable for many articles, is tedious; the forms require considerable repairing and finishing after they leave the sand, and the metal is necessarily so thick as to be for many purposes inconveniently heavy; but the stamp brings up the work on the die on light rolled sheet metal, so that the most intricate and involved patterns are executed with the greatest precision; and by the ingenious application of separate parts, the work of the carver and gilder in large decorated pieces of scroll and foliage is successfully imitated." (*Pen. Cyclopædia*, art. Birmingham.)

BRASSAGE, charges for mint expenses.

BRAZIL, an extensive empire lying in S. America, between lat. 4° N. and 33° S.; and between long. 35° and 73° W. It is bounded N. by Venezuela, French Guiana, and the Atlantic; S. and S. E. by the Atlantic; S. W. and W. by Uruguay, Paraguay, Argentine Republic, Peru, Ecuador, and New Grenada. Area about 3,000,000 square miles. Population vaguely estimated at 5,000,000; of which 1,000,000 whites, of Portuguese origin; 2,800,000 negro slaves; 300,000 Indians; and 900,000 free blacks and mixed races. It is divided into 18 provinces, namely, Para, Rio Negro, Maranham, Piauhi, Ceara, Rio Grande del Norte, Parahiba, Pernambuco, Alagoas, Sergipe, Bahia, Espirito Santo, Rio Janeiro, San Paulo, Minas Geraes, Goyaz, Matto Grosso, Fernando. Capital, Rio Janeiro. The government is a constitutional monarchy; the executive is vested in the monarch or emperor; the legislative body consists of a senate chosen by the emperor, and a chamber of deputies elected by the people.

The physical character of Brazil is as yet but imperfectly known, but so far as ascertained, it appears to be a country of vast natural capabilities. A ridge of mountains runs parallel with and at no great distance from the coast, from 10° to 32° S. lat. In the W. the land again rises to the height of from 3000 to 6000 feet, spreading out into those sandy plains called Campos Parexis, which occupy the centre of S. America. Nearly one-half of the surface is composed of uplands. The lowlands extend principally along the sides of the river Amazon, with smaller portions on the shores, and on the S.W. border. In a country equal in extent to nearly 4-5ths of Europe, the productions must be very much diversified; but the greater part of it is covered by vast forests, considerable portions of which have been only partially explored. The mineral productions, so far as known, are chiefly gold, diamonds, iron, and salt. The province of Minas Geraes is the richest in gold and diamonds; and what is called the "Diamond District" extends about 50 miles from N. to S., and 25 miles from E. to W. around the sources of the Rio Francisco, and the Rio Parana, and adjoining Tejuco, about 400 miles N. from Rio de Janeiro, where nearly 2000 persons are employed by government in collecting the stones. Gold abounds chiefly in this province, in the affluents of the Rio Francisco, but it is found likewise in all the head waters of the great rivers which flow northward into the Amazon. About the middle of last century, the annual produce was about 35,000 marcs; but, owing to the exhaustion of the auriferous sand from which it was washed, the amount decreased, and betwixt 1800 and 1820, averaged only about 9000 marcs annually. Of late, however, British capital has been applied with some success to work the veins in the mountains, particularly at Congo Soco, near Sabara, about 280 miles N. from Rio, and the produce is again doubtless more considerable. The forests abound with great varieties of wood well adapted for dyeing, for cabinet-work, and for shipbuilding. A considerable portion, however, of the country S. of 20° S. lat. especially in the province of Rio Grande, consists of extensive pastures, on which innumerable herds of cattle roam, mostly in a wild state.

The propensity of the Brazilians to seek for gold and diamonds has produced a general disrelish for sober industry. The comparatively small portion only of this fine country which is cultivated, consists chiefly of tracts extending from 30 to 40 miles around the seaports. The attention of the more intelligent Brazilians has of late been directed to the improvement of agriculture; but it is still generally in a rude state, particularly in the coffee and sugar estates, the produce of which, though raised under the highest advantages as to soil and climate, is in quality much inferior to that of the West Indies. The northern provinces produce cotton, sugar, rice, tobacco, tapioca, isinglass, caoutchouc, indigo, and a variety of drugs and dye-woods; the middle provinces, coffee, sugar, tobacco, rosewood, rice, &c.; while in the southern province of Rio Grande, the hides and horns of the wild cattle form the chief source of wealth. A small quantity of wheat was formerly raised in Rio Grande, but the late revolt of this province from the imperial government has paralyzed all kinds of industry; in point of soil and climate, however, it is so well adapted for the productions of the temperate zone that it might not only supply all the rest of the empire with provisions, but have a considerable surplus for exportation to foreign countries. The Mandioca plant is common nearly all over the empire; the root ground into meal, forming a general article of food, while the plant itself produces tapioca, which is largely exported. Indian corn, millet, and beans are also generally cultivated. Cotton is raised chiefly from lat. 15° S. to the equator; the best is that of Pernambuco; next, that of Maranham; that of Bahia and Para is inferior. Sugar is cultivated chiefly in the province of Bahia, but to a great extent likewise in the provinces of Rio de Janeiro and Pernambuco. Coffee forms the chief object of culture in the province of Rio de Janeiro, where the quantity raised is very great, and is yearly increasing. It is likewise raised, but to a comparatively trifling extent, in the northern provinces; also in some of the inland ones, particularly Minas Geraes. The cultivation of tobacco, formerly so extensive, is now on the decline; the best is grown near Bahia. Rice is raised principally in the island of Santa Catharina, and in the provinces of Maranham and Para.

The internal commerce of Brazil chiefly consists in conveying the produce of the country to the seaports, and receiving European manufactures in exchange. Mules form the common means of transport, as the roads seldom admit of the use of carriages, and as yet there is no inland navigation. A number of large rivers intersect the country in various directions; but very little is known regarding their capabilities. A company, under English direction, has however been recently formed at Rio de Janeiro for the survey and navigation of the Rio-doce.

The foreign commerce of Brazil exceeds that of any other country of America except the United States, and is yearly increasing. The exports chiefly consist of coffee, sugar, cotton, and hides, besides tallow, horns, brazilwood, rosewood, fustic, tobacco, rice, indigo, ipecacuanha, sarsaparilla, castor-oil, castor-beans, tapioca, caoutchouc, nuts, gold and diamonds. The trade in brazilwood is a government monopoly, but the commodity is extensively smuggled. The chief markets for Brazil produce are, the United States, and in Europe, London, Liverpool, Hamburg, Antwerp, Trieste, Havre, Lisbon, and Oporto. In 1838, the principal articles carried to Britain consisted of 10,373,713 lbs. coffee; 201,780 lbs. cocoa; 24,464,505 lbs. cotton; 86,515 cwts. sugar; 28,463 cwts. hides; 132 tons fustic; and 10,469 lbs. tobacco. A considerable portion of the goods shipped to the other European markets is on English account, more particularly coffee and sugar, as these two articles cannot (owing to prohibitory duties) be introduced into the United Kingdom except for re-exportation; such cargoes, however, are frequently sold in London by sample; the vessels waiting their ultimate destination in the Channel.

The imports consist of manufactured commodities of all kinds, tea, wine, oil, and provisions. The declared value of British manufactures and produce imported in 1827, according to the accounts of the British Board of Trade, was £2,312,109; in 1836, £3,030,532; in 1838, £2,606,604: the last was chiefly composed of apparel, &c. £11,576; arms and ammunition, £37,214; ale and beer, £7069; books, £1295; brass and copper manufactures, £25,595; butter and cheese, £106,221; coals, £4193; cordage, £3963; cotton manufactures, £1,657,702; earthenware, £35,275; glass, £19,393; hardwares and cutlery, £51,570; hats, £9862; iron and steel, £50,527; lead and shot, £20,043; leather, wrought and unwrought, £8164; saddlery, £2243; linen manufactures, £167,545; machinery, £13,857; painters' colours, £8238; plate, £1717; silks, £12,869; soap and candles, £58,769; stationery, £10,960; tinwares, £2090; woollen manufactures, £228,932; other articles, £58,857. A variety of articles of foreign and colonial produce are also imported from the United Kingdom: in 1838, the principal were 2528 lbs. cassia; 29,107 cwts. flour; 55,707 pieces India cottons; 11,164 pieces India silks; 4612 lbs. pepper and pimento; 536 lbs. quicksilver; 1637 lbs. rhubarb; 4050 galls. brandy; 3906 galls. geneva; 3824 lbs. tea; 165,334 lbs. tobacco; and 5683 galls. wine, chiefly Spanish and Portuguese; besides which a considerable portion of the imports from other countries are on English account: From France are imported wines, cottons, woollens, silks, saddlery, glassware, flour, books, stationery, jewellery, perfumery, and fancy articles: From Portugal, wine, oil, snuff, and a small quantity of linens: From the United States, about two-thirds of the flour, and nearly all the tea consumed in the country; also ordinary cottons, wax and sperm candles, India goods, and a variety of rough articles of furniture, implements of husbandry, &c.: From the Hanse Towns, furniture, coffee bagging, linens, paper, glass, provisions, &c.: From Belgium, cutlery, arms, copper and brass manufactures, &c.: From Spain, wine, oil, fruit, &c.: From Italy, macaroni, vermicelli, marble, &c.: From Holland, demyjohns, gin, cheese, &c.: From Sicily, wine: From Sweden, iron, tar, pitch, pine, boards, &c.: From Africa, negroes continue to be brought in immense numbers, notwithstanding the utmost vigilance of the British cruizers; these are paid for chiefly in coarse muskets and gunpowder, imported expressly for this infamous traffic from England and Belgium; and in the common cotton fabrics well known in the British manufacturing districts under the name of "coast goods." The shipping craft employed in the slave-trade is imported from the United States.

The total amount of exports is estimated at about £6,000,000, and the imports at nearly the same. Upwards of two-thirds of the whole foreign trade is in the hands of the British. The ports at which it is chiefly conducted, stated in their order from N. to S., are Para, Maranham, Paraiba, Pernambuco, Maceio, Bahia, Rio de Janeiro, Santos, and Rio Grande: the principal of these are the following:—

Maranham in 2° 31′ S. and 44° 19′ W., lies on the island of that name, forming the S. E. side of the bay of Marcos; pop. 30,000. The harbour is good and safe, but the entrance is difficult. Exports, chiefly cotton, sent for the most part to Liverpool, and rice and hides shipped to Portugal. The value of the imports in 1835 was £469,014; whereof in 23 British vessels £259,924; 35 Brazilian, £83,975; 18 Portuguese, £50,924; 19 Spanish, £23,193; 8 French, £27,547; 23 American, £32,194; and 3 Belgian, £11,257. In 1838, the value of the exports was £303,552; and of the imports, £414,002.

Pernambuco, in 8° 3′ S. and 34° 52′ W., the capital of the province of that name, and one of the most flourishing ports of Brazil, comprises three distinct towns, which are built on sandbanks surrounded by the sea, and connected by bridges; pop. including the adjoining city of Olinda, nearly 100,000. Exports, cotton, sugar, and hides; the estimated value in 1835 being £951,808. The number of vessels that entered in the same year was 247; of which 59 were British; the value of the British cargoes being in merchandise, £464,179; and in specie by packets, £35,821; total, £500,000.

Bahia is situated in 13° 1′ S. and 38° 32′ W. in the capacious bay of All Saints, with an excellent harbour; pop. 120,000. The anchorage is abreast of the city, a mile and a half distant, in 8 to 12 fathoms. Bahia was formerly the capital of Brazil, and though now subordinate to Rio, is still a place of great consideration. It is strongly fortified, and possesses both public and private shipbuilding yards. Exports, sugar, cotton, coffee, hides, tobacco, fancy woods, and drugs. The imports in 1835 amounted to £1,412,521, of which £942,956 were from Britain.

Rio de Janeiro (formerly St Sebastian), in 22° 55′ S., and 43° 9′ W., is beautifully situated on the western side of a small bay, forming one of the most magnificent natural harbours in the world; pop. about 200,000, two-thirds being blacks and mixed castes. The city lies about 4 miles from the entrance to the bay. To the right on entering is the fort of Santa Cruz, within hail of which all vessels going into the harbour are required to pass, in order to answer any questions that may be put to them. Rio is the seat of more than one-half of the foreign commerce of Brazil; and it has likewise a very extensive inland trade, particularly with the provinces of Minas Geraes, Goyaz, and Matto Grosso. It is the key to the mining districts,—furnishing all their supplies and receiving all their produce for shipment or other disposal. Exports, coffee, nearly 600,000 bags (each of 5 arrobas or 160 lbs.); sugar, about 20,000 cases (each from 1200 to 2000 lbs.); hides, No. 300,000; cotton, tallow, drugs, dyes, gold, and diamonds; the imports, of manufactured commodities of all kinds, flour, dried fish, wine, and brandy. The value of foreign goods imported into Rio in 1836, according to a statement given in the *Jornal do Commercio*, was £3,839,379; of which from Britain, £2,005,543; France, £581,571; Portugal and her possessions, £281,885; United States, £225,353; Hanseatic States, £239,384; Uruguay, £96,857; Belgium, £73,789; Spain, £61,270; Sardinia, £56,223; Argentine Republic, £44,284; Holland and her colonies, £37,046; Sicily, £33,219; Sweden, £31,589; Chili, £26,135; Austria, £14,067; Sundries, £31,164. These imports are exclusive of negroes, of whom vast numbers continue to be brought from Africa to this port or the neighbouring coast.

MEASURES, WEIGHTS, MONEY, FINANCES, &c.

The Measures and Weights are nominally those of Portugal; but there are some variations. In trade, the following proportions are usually observed: 5 varas = 6 Imp. yds.; 4 covados = 3 Imp. yds.; 99 Brazilian lbs. = 100 lbs. avoirdupois. At Rio Janeiro, 100 medidas = 73¼ wine, or 61⅒ Imp. galls.; and 12 alqueires = 13¼ Winchester bushels. At Bahia, 1 canada = 1¾ Imp. galls.; and 7 alqueires = 6 Winchester bushels. At Maranham, the alqueire = 1¼ Winchester bushel.

Money.—The integer of account is the rea, and 1000 reas make 1 milrea (1 $000), the value of which fluctuates, being reckoned in depreciated government paper, or in a debased and irregular copper money. The course of exchange with London was recently quoted at Rio Janeiro, where the paper money chiefly circulates, at only 31d. per milrea. At the northern ports of Pernambuco, Maranham, and Para, the currency is principally copper.

A conto is 1000 $000.

The paper money is in the form of imperial bank or rather treasury notes for one milrea and upwards, which are inconvertible; and the copper mostly in pieces of 40, 20, and 10 reas. The amount in circulation was lately stated to be about 33,500 contos of paper, and 6500 contos of copper money; in all 40,000,000 $000. Various projects have been brought forward for the reform of the Brazilian currency, but none has yet received the sanction of the government.

No silver or gold coins are at present in circulation. Before the introduction of paper money, the principal silver coin was the 960 rea piece, a Spanish dollar restamped, worth 4s. 2d.: the principal gold coin was the piece for 4 $000, worth 20s. 1½d.

Bills are usually drawn on London at 60 days' sight.

Finances.—The public revenue for the year 1838-39 was estimated at $13,663,289, or about £2,732,658; and the expenditure for the same year (including $5,877,985 for the finance department) at $13,622,696. The internal debt of the empire is estimated at about £5,000,000. The Brazilian loans raised in England consist of £1,686,200 contracted for in 1824 at 75 per cent.; £2,000,000 contracted for in 1825 at 85 per cent.; and £800,000 contracted for in 1829. These were raised by the issue of bonds for £100, £200, £500, and £1000; the whole bearing 5 per cent. interest, payable half-yearly on the 1st April and 1st October.

Duties.—The duty on all imports was fixed by treaty at 15 per cent. on the tariff value; but now, in consequence of the alteration of certain charges, it is estimated at 20 per cent. The duties on exports vary at the different ports. The treaty with Britain by which the import-duty was fixed continues in force until November 10, 1842, and further until notice given by one or other of the parties, in which case it expires at the end of 2 years from the date of such notice.

Brazil is said to have been discovered A. D. 1500 by Pinçon, a Spanish navigator, one of the companions of Columbus; but it was taken possession of in the same year by Pedro Alvarez de Cabral, an admiral of Emanuel, king of Portugal, by which country it was soon afterwards colonized. In 1808, in consequence of the invasion of Portugal by the French, the royal family removed to Brazil, and remained there till 1821. In 1822, Don Pedro, the crown prince of Portugal, who had been left by his father Regent of Brazil, was proclaimed emperor by the inhabitants; and in 1823 a constitution was adopted. In 1831, an insurrection broke out, which led to the abdication of Pedro I. in favour of his infant son. [PORTUGAL.]

BRAZILETTO, a kind of brazilwood (*Cæsalpinia vesicaria*) of very inferior quality which grows in the West Indies. It is imported from the Bahamas and Jamaica.

BRAZIL-NUTS, the seeds of *Bertholletia excelsa*, a remarkable plant, of which there are large forests on the banks of the Orinoco. About thirty of these nuts are contained in cells within a hard spherical fruit nearly the size of a man's head. They are wrinkled triangular substances, having pure white kernels or almonds, which form a delicious fruit when fresh, and also yield a large quantity of oil suited for lamps. They are exported to Europe from Para and French Guiana.

BRAZILWOOD (Fr. *Bois de Brésil.* Ger. *Brasilienholz.* Por. *Pao Brasil.* Sp. *Madera del Bresil*), a valuable dye-wood, the product of a tree (*Cæsalpinia crispa* ?) which grows in various tropical countries, but is found in greatest abundance, and of the best quality, in the province of Pernambuco in Brazil, where it is known as *pao de Rainha*, or Queen's-wood, from being the subject of a royal monopoly. The tree commonly grows in dry places and amid rocks, and seldom exceeds thirty feet in height. The only valuable part is the heart, which, after being freed from the thick bark and white pith, is only about one-half of the bulk of the trunk. Brazilwood is ponderous and hard; and when first cut is of a pale red, but becomes darker by exposure to air. It is variegated with irregular black spots, has a sweetish taste when chewed, and gives out its colour with water, a property by which it is distinguished from saunders-red or sandal. The thick and close-grained pieces are preferred. The wood is susceptible of a good polish, and is occasionally used by the turner and cabinetmaker, but it is chiefly employed as a red dye. It is often used for giving to silk a crimson hue, in the manufacture of red ink, and in the preparation of a brilliantly red lake. Price in bond from £50 to £85 per ton.

BREAD is in this country made almost wholly from wheaten flour. It may be divided into biscuit bread and loaf bread. *Biscuit bread* is made solely from flour and water without undergoing any fermentation; and after being kneaded, flattened out, and baked, is compact, heavy, and hard. *Loaf bread* is made by working the flour into paste with water, yeast, and a little salt, allowing it to stand until a certain degree of fermentation takes place, and then baking it in an oven heated to about 488° Fahr. During the fermentation, a quantity of gas is formed, and as it is prevented from escaping by the toughness of the paste, and dilated by the heat of the oven, the bread is rendered light, porous, and soft. Many bakers add potatoes to the flour. This admixture neither injures the quality nor the wholesomeness of the bread; but adulterations which are not so innocent are sometimes had recourse to, for the purpose of concealing the taste of damaged flour, or to make the bread white when formed of inferior flour. The use of alum is liable to this objection, as being positively injurious to health; it is employed to lighten the dough. (See *Dr Colquhoun on the Art of Baking Bread*, *Annals of Philosophy*, vol. 28. *Donovan's Domestic Economy.*)

The quantity of bread produced by the same weight of flour depends in some measure upon the properties of the corn. A Winchester bushel of wheat of fair quality, weighing 60 lbs., is usually calculated to yield 48 lbs. of household flour, which is the sort chiefly used for the manufacture of bread throughout England. When the assize of bread was fixed by the Lord Mayor of London, a sack of flour (280 lbs.) was calculated as sufficient to make 84 quartern loaves of 4 lbs. 5 oz. each. The bakers, however, admit that if the flour be of good marketable quality, it will make 86 such loaves, or 370 lbs. 14 oz. of bread, equal to 92½ loaves of the present weight of 4 lbs. each.

STATUTORY REGULATIONS.—In England (beyond the London district), and in Scotland, the baking of bread is regulated by the statute 6 & 7 Wm. IV. c. 37, the chief enactments of which are as follows:—Bakers must sell bread by weight (except French or fancy bread or rolls), under a penalty not exceeding 40s.; and must use avoirdupois weight, under a penalty not less than £2 or more than £5 (§§ 4, 5). Bakers must keep scales in their places of sale, in order to weigh the bread when required, under penalties (§§ 6, 7). The regulations apply to bread made of flour, or meal, of wheat, barley, rye, oats, buck-wheat, Indian corn, pease, beans, rice, or potatoes, and with any common salt, pure water, eggs, milk, barm, leaven, potato or other yeast, and with no other ingredient (§ 2). There are heavy penalties for adulteration (§§ 8, 9).

The baking of bread in London is regulated by the acts 1 & 2 Geo. IV. c. 50, and 3 Geo. IV. c. 106; and in Ireland by the act 1 Vict. c. 28. These acts contain regulations similar to the above.

In former times, the peasantry of these kingdoms used only bread made of rye, oats, or barley-meal, and that of wheat was exclusively devoted to the higher classes; indeed, so prevalent was the employment of inferior substitutes for this "staff of life," that in the description of a farmer's establishment as depicted in the "Vision of Piers Ploughman," supposed to have been written in the fourteenth century, we find

"A few croddes and creyme, and a cake of otes,
And bred for my barnes of beanes and of peses,"

in common use by persons of that class. In later times, the increase of the comforts of life gradually introduced wheaten bread into more general consumption; and now all other grain has nearly disappeared in the formation of our household loaf; though the use of oat and barley cakes, and of oats in the shape of "stirabout" and "porridge," is indeed still common among the labouring classes of Scotland and Ireland; while, in the north of England and some parts of Wales, a mixture of rye and wheat, under the name of "meslin," is usual among respectable families. In the north of Europe the use of rye-bread is still universal.

BREAD-FRUIT-TREE (*Artocarpus incisa*) is a native of the South Sea islands, East Indies, and other tropical countries. It is about forty feet in height, having a trunk commonly from one to two feet in diameter, and a large umbrageous head; it bears in about five years, and will probably continue prolific for fifty. The fruit, which, in the South Sea islands at least, is produced two or three or even four times a-year, is something like a roundish or oval melon, with hexagonal marks, and six or eight inches in diameter. The seedless variety is most esteemed, and its substance when washed resembles the crumb of wheaten bread. Mr Ellis, the missionary, considers the bread-fruit as the staff of life to the South Sea islanders; and Dr Solander called it "the most useful vegetable in the world," and urged that no expense should be spared in its cultivation. The mere idea of bread growing spontaneously was doubtless calculated to excite attention,—almost, perhaps, as strongly as the subsequent description of Byron:—

> "The bread-tree, which, without the ploughshare, yields
> The unreap'd harvest of unfurrow'd fields,
> And bakes its unadulterated loaves
> Without a furnace in unpurchased groves,
> And flings off famine from its fertile breast;
> A priceless market for the gathering guest."

The wood is useful, and equally so the gum that exudes from it. The bread-fruit-tree was introduced by the British government into the West Indies; but it is not reckoned equal to the plantain as food. The species, called *jack* or *jaca* (*Artocarpus integrifolia*), is a larger tree than the preceding, the trunk being, according to Roxburgh, from eight to twelve feet in circumference. The fruit is oblong and very large, sixty or seventy lbs. in weight. As an article of diet it is not much esteemed, though the natives of Ceylon eat it freely.

Some other species grow to a large size, and yield valuable timber, in Bengal and Malabar.

BREMEN, one of the Hanseatic republics, is situated on the river Weser, about 60 miles from its entrance into the North Sea. It consists of a town and small territory. Area, 67 British square miles; pop. 57,000. The government is vested in a senate and convention of burgesses.

The city of Bremen lies in 53° 4′ N. and 8° 48′ E., and is divided into two unequal portions by the Weser; pop. 41,500. Vessels drawing not more than 7 feet come up to the town, and those drawing 13 feet may come up to Vegesack, about 13 miles below Bremen; but large vessels do not generally ascend higher than Bremen Haven, lying on the E. bank, about 38 miles below the town. Bremen possesses considerable manufactories of refined sugar, tobacco, leather, and other articles; but its importance is derived from its being one of the principal continental ports for the warehousing and transit of foreign and German commodities. By the Weser, Werra, Fulda, and other channels, it receives produce and manufactured goods (particularly linens) from Hanover, Saxony, Hesse, and Westphalia; supplying these places in return with tropical produce, British goods, and other commodities. About 700 vessels arrive annually, including nearly 140 from Britain, and nearly the same number from the United States. The imports in 1838 consisted of 14,498,000 lbs. coffee; 23,818,000 lbs. tobacco; 14,000,000 lbs. raw sugar; 6600 bales cotton; 2,500,000 lbs. rice; 45,090 tuns train oil; 1,000,000 lbs. butter; 800,000 lbs. cheese; 1,180,000 lbs. hides; 200,000 lbs. tea; 33,000 lbs. indigo; 11,000 hhds. wine; 500,000 lbs. linseed; with earthenware and other manufactured goods, grain, metals, dye-stuffs, spices, saltpetre, rosin, spirits, currants, tar, tallow, and a variety of articles of smaller value; amounting annually in all to about 16,000,000 rix-dollars, or £2,633,280. The exports by sea amount to about 12,000,000 rix-dollars, and consist chiefly of linens to the annual value of about 3,500,000 rix-dollars; tobacco and snuff about 6,000,000 lbs. yearly; soap, starch, refined sugar, syrup, and other manufactures; grain, hams, bacon, bones, bark, oil-cake, rags, chicory, quills, drugs, and lead. Of late years Bremen has likewise become the chief port for emigration from the Continent to America.

Measures and Weights.—The ell of 2 feet = 22·76 Imp. inches, and 100 ells = 63¼ Imp. yds.

The ahm of 20 viertels, 45 stubchen, or 180 quarts, = 31½ Imp. galls.; 1 fuder of Rhenish wine = 6 ahms; 1 ahm of French wine = 44 stubchens; 1 tonne beer = 45 stubchens; 1 tonne of train oil = 6 steckans, or 96 mingels.

The last of corn of 4 quarts, 40 scheffels, 160 viertels or 640 spints, = 9·77 Imp. quarters.

16 ounces = 1 pound; 14 lbs. = 1 lispond; 116 lbs. = 1 centner = 127·44 lbs avoird.; or 10 Bremen lbs. = 11 lbs. avoird. nearly. Gold and silver are weighed by the Cologne mark.

Money.—The integer of account is the rix-dollar current of 72 groots, or 360 schwaren; and 5 rixdollars are reckoned equal 1 Carl d'or, or old Louis d'or, worth about 16s. 5d. The par of exchange with London is thus nearly R.D. 609 = £100; and 1 R.D. = 3s. 3½d.

Usance of bills from Germany and Holland, 14 days' sight, and from England and France 1 month after date. Days of grace, 8; but none are allowed on bills at sight, or from 2 to 5 days after sight.

Banks, Finances, &c.—Bremen possesses, among other institutions, a bank, a discount office, and several insurance offices. According to the budget for the year 1838, the public revenue was R.D. 536,078 or £88,185, and the expenditure, R.D. 580,207, including R.D. 101,600 as interest, and R.D. 45,084 as sinking fund of the public debt.

Duties.—The duty on all goods exported is only ¼ per cent. *ad valorem*; on all goods imported ½ per cent. The port and shipping charges are also very moderate.

BRENTA, an Italian liquid measure equal to nearly 16 Imp. galls.

BRICK, a mixture of clay, with sand, ashes, or chalk, dried in the sun, and burned in a *clamp*, or baked in a kiln into a kind of artificial stone for the use of builders. They are made in very large quantities in England and Ireland; but not in Scotland, where stone is the chief material for building. They are of various kinds, but are almost all moulded of one size, namely 10 inches long, 5 wide, and 3 thick; and when burned, on an average 9 inches long, 4½ wide, and 2½ thick. The best *stock-bricks* (those from the centre of the clamp, of an equal hard texture and even colour) are worth from 30s. to 40s. the 1000; the inferior soft red bricks, called *place-bricks*, from 20s. to 30s.; and *clinkers*, or *burrs*, masses of vitrified brick, about 10s. a-load. *Dutch clinkers* are small hard yellow bricks. *Malm-stocks* are carefully tempered bricks made from clay, to which ooze, chalk, or marl is added; they are of a fine clear yellow colour, and are used for facing walls and making arches over doors and windows; the softest kind are called *cutters*, from their admitting of being cut with the trowel. *Fire bricks* are kiln-burnt, from a peculiar kind of clay found in perfection at Windsor, Stourbridge, and in various parts of Wales, whence the varieties derive their names. These last, sometimes called Welsh lumps, stand an extreme heat, and are made of large sizes for sugar-boilers, brewers' coppers, and other purposes.

Brickmakers in Great Britain must duly enter their fields for the inspection and superintendence of the Excise, in terms of the act 2 & 3 Vict. c. 24. This act likewise provides for payment of the following duties:—For every 1000 bricks of a size not exceeding 150 cubic inches each, made in Great Britain or brought there from Ireland, a duty of 5s. 10d. For every 1000 bricks, exceeding that size, made in Great Britain, or brought there from Ireland, a duty of 10s. These duties are repaid on the bricks being exported to Ireland, or to foreign parts as merchandise.

The brick manufacture has greatly increased of late years. In England, the number charged annually with duty is about 1,500,000,000; in Scotland, 30,000,000; total, about 1,530,000,000; yielding of duty about £440,000. The quantity made in Ireland is not known, as no duty is exigible in that part of the United Kingdom.

BRIGANTINE, OR BRIG, a vessel with two masts, square rigged in the same manner as a ship; the spanker and spanker-boom being in the brig attached to the mainmast. [SHIP.]

BRILL, a flat fish (*Rhombus vulgaris*), similar to turbot, but smaller and inferior in quality. It is plentiful on our southern coast, and is brought in abundance to the London market.

BRIMSTONE. [SULPHUR.]

BRISTLES (Ger. *Borsten*. Rus. *Schtschetina*), hard, strong, shining hairs, which form the manes of wild boars and hogs, and are imported from Russia and Prussia for the use of brushmakers, shoemakers, and saddlers. About 1,700,000 lbs. are annually entered for home-consumption.

BRITANNIA-METAL, a compound of tin, the regulus of antimony, copper, and brass, extensively employed in Sheffield and Birmingham, especially the former, in the manufacture of teapots, spoons, and a variety of other articles. All wares that were formerly made of pewter, and most of those now made of silver, or which are plated, are imitated in Britannia-metal. The articles made of it possess considerable beauty, and are very cheap; and when sufficiently massive, they are also very durable.

BROCADE, a fabric composed of satin, striped or purfled with gold or silver. It was at one time used for dress, but more lately for ornamental furniture. None has been manufactured in the United Kingdom for many years. The last is said to have been some very elegant pieces woven at Spitalfields, to be used as chair bottoms at Carlton House, for his Majesty King George IV.

BROKER, a person employed as an agent or middleman to transact business between merchants or other individuals. Brokers generally confine themselves to negotiations for the purchase and sale of some particular articles, by which means they acquire an intimate knowledge of their qualities, as well as an acquaintance with the sellers and buyers, and the state of supply and demand; and they are thus enabled to negotiate between dealers on terms equitable for both. A merchant seldom has the same intimate knowledge for his guidance, and therefore generally finds it advantageous to effect his purchases and sales through the medium of brokers. Brokers are, however, of different kinds, as, besides the ordinary commercial or produce brokers, there are ship-brokers, insurance-brokers, bill-brokers, and stock-brokers.

A commercial broker is a person who makes it his business to find purchasers for goods offered for sale, and vendors of goods wanted on purchase, thus becoming the medium through which transfers are accomplished. Brokers in London require, by 6 Anne, c. 16, to be admitted by the mayor and aldermen, who have a general superintendence over them, and are entitled to enforce certain regulations which they were empowered by that act to frame. By local act 57 Geo. III. c. 60, they must pay an admission fee of £5, and the sum of £5 annually; and are liable to a penalty of £100 for acting without being duly admitted. In England, a broker is agent for both parties, under the section of the statute of frauds (29 Ch. II. c. 3, § 17), which renders it necessary that in sales where the price exceeds £10, some writing should pass between the parties or their agents. The writing in this case is the bought-and-sold notes, which are notes of the bargain delivered by the broker, one to each party. "With respect to contracts made through a broker," says Mr Starkie, "it is now perfectly well settled that the bought-and-sold notes are, if they correspond, evidence to bind the bargain, although the broker has not signed a formal entry in his book, *secus* if they do not correspond. Although it be clear that an entry signed by the broker is not essential to the validity of a contract where formal bought-and-sold notes have been delivered, it is another question whether the broker's entry of the contract, signed by him, would be sufficient in the absence of sufficient bought-and-sold notes" (*Law of Evidence*, ii. 869, 870). Formerly the entry in the broker's book was held to be the contract, the bought-and-sold notes being merely transcripts of it, but the rule has latterly been to place dependence on the latter where they exist. "There is not," says Professor Bell, "in Scotland any necessity, as by the practice of England, for a signed note to be entered in the broker's book" (*Bell's Principles*, § 89). Where the name of the purchaser has not been communicated, the seller may withdraw where the price is not for ready money, if he give speedy warning after inquiry into the condition of the purchaser. (*Morton on Vendors and Purchasers*, 76-78. *Smith's Mercantile L.* 411, 412. *Starkie*, ut supra. *Bell's Com.* i. 435, 436.) [FACTOR. LIEN.]

Ship-brokers are persons who undertake the management of all business matters occurring between the owners of vessels and the shippers or consignees of the goods which they carry; such as procuring cargo or a charter for outward-bound ships, entering and clearing them at the custom-house, and collecting freight on the goods which vessels bring into port. Many ship-brokers act also as insurance-brokers, in which capacity they procure underwriters to policies of insurance, adjusting with the latter the various conditions under which they engage to take the risk, and recovering the sums for which they are responsible in the event of loss. [INSURANCE. POLICY.]

For an account of the duties of bill-brokers and stock-brokers, see the heads EXCHANGE and FUNDS respectively.

Persons who deal in old household furniture are also called brokers, though their occupation bears no analogy to that of any of the commercial agents above mentioned. In England, such persons frequently superadd to their business the appraising and distraining of goods, for the performance of which functions, however, they must provide themselves with an excise license, and conform to the regulations of the act 57 Geo. III. c. 93. The business of a pawnbroker is also different from those already noticed. [PAWNBROKER.]

BROKERAGE, the per centage charged by brokers for the sale or purchase of goods, bills of exchange, or stock. [COMMISSION.]

BROMINE, a substance obtained by a chemical process from the uncrystallizable residue of sea-water, commonly called *bittern*. It is a liquid of a deep reddish-brown colour, and disagreeable suffocating odour. Sp. gr. 3. It is highly poisonous. Bromine was discovered by M. Balard of Montpellier in 1826. The alcoholic solution of bromine, and the bromide of sodium are employed in medicine. (*Brande's Chemistry.*)

BRONZE, an alloy consisting of from 8 to 12 parts of tin, with 100 of copper. It is sometimes called gun-metal; and is used for casting statues, cannons, and other purposes.

BRONZE-POWDER. [MOSAIC GOLD.]

BROOM, a small, hardy, evergreen tree (*Spartium scoparium*), common in this country. The wood is used for pins, pulleys, and snuff-boxes; when of sufficient size it is also applicable to the same purposes as laburnum, which, except in colour, it closely resembles. The branches are used for thatching. The flowers of the species called dyer's broom (*Genista tinctoria*) yield a bright yellow colouring matter, which is used in dyeing wool.

BROOM, a well known utensil, so called from having been originally made from the twigs of the broom-tree.

BRUNSWICK, a German duchy, consisting of several detached portions of territory on the rivers Weser, Leine, Ocker, and Aller, between lat. 51° 38′ and 52° 59′ N., and long. 9° 10′ and 11° 22′ E., and is contiguous to Hanover and Prussia. Area, 1505 square miles; pop. (1839) 260,000. Circles: Brunswick, Wolfenbüttel, Helmstedt, Gandersheim, Holzminden, Blankenburg. Capital, Brunswick; pop. 35,000, chiefly Lutherans. Government, a constitutional monarchy, regulated by the national compact called the Landschaft's-Ordnung, of the 12th October 1832.

The northern districts, particularly Wolfenbüttel, have an undulating surface, and their soil is highly productive; the southern, including the Blankenburg territory, which lie within the limits of the Harz, are composed of a succession of mountains, in part well wooded, and studded with highly cultivated valleys. The aspect of the whole of the duchy is indicative of good order and prosperity. The principal articles of home manufacture exported, are timber, yarn, linen, grain, oil, chicory, madder, leather, hops, and ironware, amounting to about £150,000 per annum. The chief imports are colonial produce, raw materials, fish, butter, cheese, and cattle. Having no coast, and, except the Weser, no navigable streams, the foreign trade of the duchy is naturally cramped; but a customs league exists with Oldenburg and Hanover, which opens to her the communication with the German Ocean by means of the Elbe and the Weser; and the transit trade between the Hanse Towns and the interior of Germany is a considerable source of emolument. Two fairs are held annually at the town of Brunswick; they begin on the Thursdays that fall nearest to Candlemas and St Lawrence's day, and each lasts about ten days.

Measures and Weights.—The ell of 2 feet = 22·46 Imp. inches. The wine ahm of 40 stubgens = 32·28 Imp. galls. The corn wispel of 4 scheffels or 40 himtens = 34·20 Imp. bushels. The centner of 114 lbs. = 117 lbs. 6 oz. avoird.; and 100 Brunswick lbs. = 103 lbs. avoird.

Money.—The integer of account is the Prussian dollar of 30 silver groschen = 2s. 10¾d. sterling.

Finances.—Revenue, after deducting the civil list expenditure, about £145,000 per annum. *Debt*, £495,000.

BRUSHES (Fr. *Brosses*. Ger. *Bürsten*. It. *Setole*, *Spazzole*. Por. *Escovas*. Rus. *Schtschetki*. Sp. *Brozas*, *Cepillos*), cleansing instruments, generally made of bristles set in wood.

BUBBLE, a name familiarly applied to any chimerical or fraudulent commercial project carried on for the purpose of enriching the projectors at the expense of those who subscribe for shares. The mischief produced by the South Sea scheme and other gambling projects, in the years 1719 and 1720, led to the passing of the statute 6 Geo. I. c. 18, commonly known as the *Bubble Act*, prohibiting companies of this description tending to the prejudice of the public. The difficulties inseparable from the construction of this act (which never seems to have been observed) were removed in 1825, when it was repealed by the statute 6 Geo. IV. c. 91; and the projectors of bubble companies are now punishable only when they can be deemed guilty of fraud at common law.

BUCHU, a low shrub (*Diosma crenata*) found at the Cape of Good Hope, the aromatic leaves of which, reputed to be powerfully antispasmodic, are an article of the *materia medica*.

BUCKBEAN, or Marsh-trefoil, a plant (*Menyanthes*) common in this country, the flowers of which are an article of the *materia medica*.

BUCKLE (Fr. *Boucle*. Ger. *Schnalle*). The buckle manufacture long ranked as one of the great staples of Birmingham, and its mutations through all the capricious and fantastic varieties of form and ornament which prevailed during the age of powder, embroidery, and gold lace, would furnish materials for an interesting work. The shoe-buckle having at length been completely supplanted by shoe-strings, the manufacture lost all its importance. In 1791, his late Majesty George IV., then Prince of Wales, attempted, at the solicitation of the manufacturers, to revive the taste for buckles; but the tide of fashion set too strongly in the opposite direction to be controlled even by the example of royalty.

BUCKRAM (Fr. *Bougran*. Ger. *Schettre*. It. *Tela collata o gommata*. Por. *Olandilha*. Sp. *Bucaran*), a coarse kind of linen or cotton fabric, having a peculiar stiffness imparted to it by strong gum and calendering, and chiefly used in the making of clothes to keep them in the proper shape. Buckrams are ¾ wide; when formed of cotton they are generally in pieces of 28 yards in length; when of linen, 25 yards. (*Perkins on Haberdashery.*)

BUCKWHEAT, OR BRANK (Fr. *Blé Sarrassin*. Ger. *Buchweizen*. It. *Grano Saraceno*. Por. & Sp. *Trigo Saracino*), an annual plant (*Polygonum fagopyrum*), a native of a warm climate, which grows with a strong branching stem of a reddish colour, about 2 feet high, and the seeds of which, when ground, produce a fine farina which in appearance resembles that of wheat. Its cultivation has never been very extensive in the variable climate of Britain. In England a little of it is cultivated in Norfolk, Suffolk, and some other counties, on light and poor soils; in other parts it is ploughed down as a manure while in flower. In Scotland it is seldom cultivated except for feeding pheasants and other game. "On the Continent it is used in the distillery, and its flour made into bread, which is palatable and nutritious. In France it is given to horses, and it is said that a bushel of its grain goes farther than 2 bushels of oats; and, if mixed with four times its bulk in bran, will be full feeding to any horse for a week. Its straw is said to be more nourishing than that of clover, and its blossoms form a rich repast for bees. The produce may be reckoned about 4 qrs. per Imp. acre" (*Lawson's Agriculturist's Manual*). The quantity annually imported is of trifling amount.

BUDGET, a name applied to the annual statement of the public revenue and expenditure submitted by the Chancellor of the Exchequer to the House of Commons. The accounts which accompany the statement show on the one hand the sums required for the public service during the year, under the heads of Navy, Army, Ordnance, and Miscellaneous Services, together with any incidental charges ; and on the other hand are given the *Ways and Means* for meeting the same, consisting of the surplus (if any) of the *Consolidated Fund*, the annual duties, and such incidental receipts as come in aid of the national revenues. These accounts are, however, defective, and not readily understood, as the interest of the national debt and other permanent charges are not included, and nothing is stated regarding the produce of the permanent taxes, which form the consolidated fund, except the amount of its surplus or deficiency, after providing for the permanent charge upon it.

BUENOS AYRES, ARGENTINE REPUBLIC, or States of the Rio de la Plata, a South American confederation, whose territories embraced the vast country lying between lat. 22° and 41° S., and long. 57° and 70° W., formerly part of the Spanish viceroyalty of Buenos Ayres. Area, 910,000 square miles ; pop. 700,000, chiefly Indians and mixed races. The confederated states were Buenos Ayres, Entre-Rios, Corrientes, Santa Fé, Cordova, Santiago, Tucuman, Salta, Catamarca, Rioja, San Juan, San Luis, Mendoza, with capitals of the same name, excepting Entre-Rios, of which the chief town is Baxada. This confederacy was dissolved some years ago by civil disputes, and the country remains in a divided condition. Buenos Ayres being the leading, and the only maritime state, its acts are often considered abroad as those of the whole country.

The chain of the Andes runs along the whole western boundary, and the country for several hundred miles to the east of this chain is generally mountainous. The territory E. of the river Parana is waving, well-watered, and fertile ; but the district between that river and the mountains, and extending from N. to S. through the whole length of the country, consists of extensive plains. In the N. these plains are in many parts liable to be overflowed ; in the S. they are called *pampas*, and are remarkably dry and destitute of trees. Mines of the precious metals exist in the states adjoining the Andes, particularly from Mendoza northwards ; and the extensive districts between the Paraguay and the mountains abound in salt. The country is however chiefly celebrated for the countless herds of wild cattle and horses which roam in the vast natural pastures of the plains, and whose hides and tallow at present constitute the chief source of wealth. The grounds in the vicinity of the towns are in general cultivated, producing wheat, maize, and barley, together with the sugar-cane, orange, cocoa, fig, olive, and vine.

The external commerce of the country is conducted entirely at the town of Buenos Ayres, which is the outlet for the produce not only of the whole valley of the river Plata, but also of large districts of Peru and Chili. It is a fine healthy town, situated in lat. 34° 36′ S., long. 58° 24′ W., on the S. W. side of the estuary of the Plata, about 180 miles from its mouth ; pop. 70,000. The river is here 35 miles broad, but so shallow towards the S. bank that large vessels have to unload by means of lighters in the outer roads, distant 8 miles from the port ; while small vessels cannot approach nearer than the inner roads, distant about 2 miles : even open boats cannot be brought close to the beach, and have to land goods and passengers in rudely constructed carts. The Exports chiefly consist of ox-hides, with jerked beef and sheep's wool ; the last has risen into importance only within these few years. In the year 1837, according to Sir Woodbine Parish (*Parish's Buenos Ayres*, p. 354), the exports were as follows :—Ox-hides, No. 823,635, value $3,294,540 ; jerked beef, 178,877 quintals, value $446,092 ; sheep's wool, 164,706 arrobas (of 25 lbs.), value $329,412 ; silver, Spanish dollars, No. 258,743, marks, No. 4881 ; gold, 22,361 oz. ; horse-hides, No. 25,367 ; horns, No. 434,456 ; horse-hair, 70,372 arrobas ; nutria-skins, No. 51,853 ; tallow, 100,249 arrobas ; sheep-skins, 56,188 dozens ; flour, 14,069 fanegas ; corn, 4150 fanegas ; besides a variety of smaller articles, amounting altogether to 5,637,138 Spanish dollars, or about £1,127,427 sterling ; to which Sir W. Parish thinks about 20 per cent. may be added on account of short manifests by the shippers. All these articles are exported to Europe except the jerked beef, which goes to Havanna and Brazil ; the corn and flour to the last mentioned country ; and a considerable portion of wool and sheep-skins, which are carried to the United States. The exports to Britain chiefly consist of hides, wool, nutria-skins, and tallow. Antwerp is the principal market on the continent of Europe for the hides of Buenos Ayres.

The Imports in 1837 amounted to about £1,400,000 sterling, of which those furnished by Great Britain constituted nearly one-half ; the declared value of the produce and manufactures of the United Kingdom sent to the states of La Plata, including Monte Video, having been in that year £696,104 ; while on an average of the ten preceding years, 1827-1836, the amount was £556,080. The imports from Britain chiefly consist of cottons, especially plain and printed calicoes, which are now become of the first necessity to the lower orders ; also of linen, woollen, and silk manufactures, ironmongery, cutlery, coarse and fine earthenware, glass, tea, foreign brandies, and wines : From France are imported articles of luxury rather than of necessity, such as superfine cloths and linens, merinos, cashmeres, silks and cambrics, lace, gloves, shoes, looking-glasses, combs, jewellery, and all sorts of made-up finery ; the whole amounting in 1836 to £231,373 : From Belgium, arms : From Holland, gin, butter, cheese, hams : From the Baltic States, iron, cordage, canvass, pitch, tar, and deals. The Mediterranean trade is principally in Sicilian and Spanish produce, especially the cheap wines of Sicily and Catalonia, of which from 10,000 to 12,000 pipes are taken yearly, brandies (1000 pipes), olive oil, macaroni, and dried fruits : in amount this trade is fully equal to that from France, or from the North of Europe. From the United States are brought flour, coarse unbleached cloths, spirits, soap, sperm candles, dried and salted provisions, tobacco, ordinary furniture, and deals, amounting yearly to about £140,000 : From Brazil, tobacco, sugar, coffee, rice, and *yerba maté* or Paraguay tea : From Havanna, sugar, coffee, and tobacco. About 240 vessels enter the port of Buenos Ayres annually.

The Plata is navigable for ships to Assumption, the capital of Paraguay, about 1000 miles from its mouth; and for small craft to the 18th degree of south latitude. From Paraguay immense quantities of *yerba maté* are brought to Buenos Ayres packed in hides, and distributed throughout Chili and Peru. These countries are besides partly supplied by Buenos Ayres with European manufactures.

Measures and Weights same as Spain.

Money.—The integer of account is the current dollar, which is divided into 8 reals, each of 16 quartos, or 34 maravedis. The circulating medium is principally composed of government paper money, which, by its overissue, has depreciated the value of the current dollar to about 5d. sterling. Some copper money is also in circulation. The silver dollar coined by the Argentine Republic was of the same weight and fineness as the Spanish hard dollar.

Finances.—These are in a deplorable condition owing to the late hostilities with Brazil and France. In 1836, the revenue was estimated at $12,000,000 currency, which was quite insufficient to meet the ordinary expenditure of the state. The amount of funded debt unredeemed (6 per cents.), in the same year was $35,917,166 currency; besides, the English loan for £1,000,000 sterling, the interest on which (6 per cent.) has been unpaid since January 1828; and the amount of the bank issues in circulation, about $20,000,000 currency. These accounts, though *ex facie* national, relate to the *province* of Buenos Ayres alone: the other provinces, containing ⅘ths of the population of the republic, contribute nothing towards the general expenses, though most of them manage to support their petty provincial administrations.

A Treaty of Commerce between Great Britain and the United Provinces of Rio de la Plata was executed on 2d February 1825: it was the first treaty entered into by any European power with the new republics of America.

The Plata was discovered by Juan Diaz de Solis, a Spaniard, in 1512; and in 1534 the country was conquered by Mendoza, who founded the city of Buenos Ayres. In 1778, the province of Buenos Ayres, which had hitherto been a dependency of the Spanish viceroyalty of Peru, was formed into a separate viceroyalty, which included the present States of Bolivia, Paraguay, Uruguay, and the Argentine Republic. In 1816, the states of the Argentine Republic declared their independence of Spain. Several revolutions have since taken place; and from March 1838 to October 1840 Buenos Ayres was blockaded by the French.

BUFF, a kind of leather generally prepared by dressing buffalo-skin with oil, after the manner of shammy. It is also made from the skins of other animals.

BUGLES, a species of glass beads, formed into small capillary pipes, broken into various lengths. They are imported in large quantities from the Levant. Duty is paid on about 40,000 lbs. annually, and a considerable quantity is likewise re-exported to Africa and Asia.

BUILDING SOCIETIES. [Friendly Societies.]

BULLION, a term strictly applicable only to gold and silver in an uncoined state, but of late used commonly to denote the precious metals in general. No commodities being so permanent in their value, so uniform in their quality, and so easy of transport as gold and silver, these metals, besides their extensive use in the arts, have been employed from a very early age in the form of coin, as a measure of the value of other commodities; and their employment for this purpose is at present nearly universal.

The precious metals were in ancient times derived from a great variety of sources, but since the discovery of America they have been obtained principally from the Central and Southern part of that continent. According to Humboldt, the average annual supply procured thence from 1492 to 1500 was £52,083; from 1500 to 1545, £625,000; from 1545 to 1600, £2,291,666; from 1600 to 1700, £3,333,333; from 1700 to 1750, £4,687,500; from 1750 to 1803, £7,354,166; and at the commencement of the present century, £9,062,500.

The revolutionary tumults in the Spanish American colonies in 1810 led to so great a dilapidation of the mines, that their produce was lessened by one-half; the average annual supply from 1810 to 1830, according to Mr Jacob, being only £4,036,838. In 1825, a number of joint-stock companies were formed in Britain for the purpose of working the mines; but their operations were conducted with so little skill that for several years no observable increase took place on the annual supply of the precious metals; and though the case is now somewhat different, yet the prospect of the South American mines being rendered equally productive as before, is distant and uncertain.

Of late years new sources of supply as regards gold have been discovered in the United States and Russia. In the former gold was discovered in North Carolina in 1804, and afterwards in Georgia and other states; but the produce realized was trifling until 1830, when about £97,083 were minted, exclusive of an equal amount supposed to have been consumed or exported in an uncoined state. The produce has since been considerably increased; but well-informed persons are opposed to the opinion that any permanently extensive supply can ever be derived from that quarter. In Russia the case is different. The gold mines of that country, situated in the Uralian Mountains, yielded, in 1820, 1938 lbs. avoird.;

and their produce has since progressively increased. In 1835 it amounted to 10,620 lbs., value £645,165; and most accounts concur in representing the supply as likely to prove lasting as well as abundant. At present the total annual produce of America, Europe, and Asia may be estimated as follows:—

Country.	Principal Localities.		Gold.	Silver.	Total.
	Gold.	Silver.	£	£	£
Mexico	Sierra Madre	Real del Monte	100,000	2,300,000	2,400,000
Central-America	Costa-Rica	Honduras	15,000	50,000	65,000
Colombia	Choco	Momarto	375,000	8,000	383,000
Peru	Pataz, Huailas	Pasco	30,000	950,000	980,000
Bolivia	Tipuani River	Potosi	40,000	400,000	440,000
Chili	Petorca	Copiapo	200,000	300,000	500,000
Brazil	Congo Soco		200,000	.. ..	200,000
			960,000	4,008,000	4,968,000
United States	N. Carolina, Georgia		150,000	.. ..	150,000
Europe	Transylvania, &c.	Hungary, &c.	140,000	450,000	590,000
Asiatic Russia	Ural Mountains	Altai	650,000	170,000	820,000
			1,900,000	4,628,000	6,528,000
Rest of Asia	Borneo, China	China	1,235,000	915,000	2,150,000
		Total,	3,135,000	5,543,000	8,678,000

No notice is taken of Africa, as the former reports of its produce appear to have been grossly exaggerated; and it may now be well doubted whether the supply derived from that part of the world is more than equal to the consumption. The estimates for Mexico, Peru, Bolivia, Chili, United States, and Asiatic Russia, are founded on returns by the British consuls in those countries,—allowance being made for the quantities raised in Peru and Chili, and exported clandestinely. The estimates for the other countries are chiefly founded on statements made by Mr Jacob and Mr John Crawfurd. So much uncertainty, however, attends all calculations of this kind, that the preceding summary, and more especially the part which has reference to the portion of Asia not subject to Russia, is to be regarded merely as a loose approximation.

Vague as are all estimates regarding the production of the precious metals, those regarding their consumption are much more so, there being no data upon which to found any calculation of the proportions used for coin and in the arts, or of the supply obtained for these purposes by the fusion of old plate. Humboldt estimated the quantity of gold and silver annually consumed in Europe, exclusive of that used for coin, at £3,500,000. Mr Jacob's estimate, in 1830, of the amount applied to ornamental and luxurious purposes, was as follows:—Great Britain, £2,457,220; France, £1,200,000; Switzerland, £350,000; rest of Europe, £1,605,490; America, £280,630; total of Europe and America, £5,893,340; or, after deducting 1-40th for that supplied by the fusion of old plate, to £5,746,006. Adding 1-5th of this for Asia will make the total consumption of Europe, America, and Asia, exclusive of that used for coin, £6,895,207.

The quantity required to serve as coin depends upon a great variety of circumstances,—such as the wealth and population of the different countries of the world, the extent to which their currency has been economized by the use of paper-money, and by the art of banking, the waste of coins by abrasion, and their loss by accident, and by the practice, common in uncivilized countries, of burying treasure. Of these the most important as regards the consumption of the precious metals is the loss by abrasion. According to recent experiments at the mint, this appears to be upon British silver coin about 5s. and upon gold 1s. 3d. per cent. per annum; but on the general amount of coin throughout the world it cannot be reckoned at less than 5s. per cent. upon both,—the foreign silver-money being about four times that of gold in amount, and inferior in fineness to British silver. The whole amount of the precious metals in the world is estimated by Mr Senior at two thousand millions sterling. No estimate has been formed of the amount existing in the form of coin; but the annual loss by abrasion and otherwise can scarcely be assumed at less than £2,000,000. This, added to the amount used for other purposes, would raise the total annual consumption of gold and silver to £8,895,215, a sum nearly equal to the annual supply. It has to be observed, however, that Mr Jacob's estimate of the annual consumption for other purposes than coin is by many supposed to be greatly exaggerated: his allowance of only 1-40th for the fusion of old plate is also considered to be much too small.

The value of gold and silver, like that of all other commodities, is regulated by the amount of capital and labour required to bring them to market,—in other words, by their cost of production. If this could be reduced, their value would fall, and the money value of other commodities would proportionally rise: if, on the other hand, their cost of production were to be augmented, their value would be increased, and the money value of other commodities would proportionally fall. Any fluctuation, therefore, on the value of gold or of silver, according as the one or the other has been adopted as the standard, is necessarily productive of a corresponding variation in bullion prices, and a proportionate derangement of all existing contracts. The influence of a reduced cost in obtaining the precious metals upon bullion prices, has been experienced since the discovery of America, where the mines have yielded those metals with so much less labour than the mines previously worked in the Old World, that gold and silver have fallen to one-third of their former value, and bullion prices have been raised to three times their former rate. This effect did not, however, take place at once, but gradually, and was not fully realized until about the close of last century.

The natural tendency of the defalcation in the produce of the Spanish American mines after 1810 was to reduce bullion prices; and by many persons the remarkable fall, which occurred in Europe after the close of the war, is in part attributed to this circumstance. It would appear, however, that this decline can be accounted for by increased facility of production, or by other causes affecting each particular commodity; "that no direct influence of the defalcation of the produce of the mines is to be traced in the late fall of prices; and that consequently the presumption must be, either that the mass of the metals is so large as to render what might otherwise appear to be considerable variations of supply, imperceptible in general prices, or that circumstances affecting their functions and distribution have counterbalanced these variations" (*Tooke on Prices*). Of the latter, perhaps the most important were the immense quantities of plate and hoarded treasure exported from South America to Europe by the loyalists and others during the civil dissensions, and the cessation of the drain of silver from Europe to China and India, and an inversion of the stream by an importation which is still taking place. It must be admitted, however, that, all other circumstances being the same, if the produce of the mines had not fallen off, prices would now be higher in some proportion to the larger supply of the metals.

Gold and silver are subject to fluctuation in their relative value towards each other as well as to other commodities. More labour and capital have always been requisite to bring a given quantity of gold to market than the same quantity of silver, and the value of the former has in consequence been always much greater than that of the latter; but the proportion in which gold has exceeded silver in value has varied at different times. Among the Romans gold to silver seldom varied more than from nine to eleven for one; nor did the relative value of the metals fluctuate more down to the time when the Spanish American mines were brought into full activity. Since that period the comparative value of the two kinds of metal has been gradually changed, and gold is now become rather more than 15½ times as valuable as silver.

Gold is the standard of value in this country, and it is regularly purchased by the Bank of England at the rate of £3 : 17 : 9, and issued at the rate of £3 : 17 : 10½ per ounce of 22 carats (11-12ths) fine; its price may therefore be regarded as fixed. Silver, however, though the standard of value in most foreign countries, is here used merely as a subsidiary currency, and its price is therefore regulated by the state of the exchange. For some years past it has varied little from 5s. per ounce of the fineness of 11 oz. 2 dwts. (37-40ths). Gold bullion occurs chiefly in the form of bars or doubloons, silver bullion in that of bars or dollars. The bullion trade of the United Kingdom is almost wholly confined to the Bank of England and a few private merchants in London.

Bullion is chiefly imported by the government packets and ships of war, the charges attending which are detailed in the Navy List.

The exportation and importation of bullion in this country is free; and by 3 & 4 Wm. IV. c. 52, § 2, it may be landed without report entry or warrant. [COIN. EXCHANGE.]

BULRUSH, a plant (*Scirpus lacustris*) much used for putting between the staves of barrels, and for chair-bottoms and matting. It is imported from Russia and Holland; but it might be profitably grown in marshes in this country where the soil is not very peaty, and of rather superior quality; particularly on the banks of rivers which are flooded by fresh water tides.

A load of bulrushes consists of 63 bundles.

BUOYS (Fr. *Bouées*. Ger. *Ankerboyen*. It. *Gavitelli*. Sp. *Boyas*) are floating pieces of wood or cork moored to some certain spot, in order to point out the course that a vessel should follow; they are also used to mark the situation of ships' anchors,—the former being denominated public, the latter private buoys. The public buoys on the English coasts are under the control and management of the Trinity House, Deptford-Strond; and those of Scotland and Ireland are under its supervision (6 & 7 Wm. IV. c. 79). Small tonnage duties are charged on the shipping for the maintenance and repair of the public buoys. [LIGHTHOUSE.]

"Every person who shall ride by, make fast to, or remove, or wilfully run down, or run foul, of any vessel placed to exhibit lights, or any buoy or beacon, belonging to, or placed by, any corporation, or society, having lawful authority to place the same, shall, besides being liable to the expense of replacing or making good any damage occasioned thereby, forfeit for every such offence any sum not exceeding £50, nor less than £10." (6 Geo. IV. c. 125.)

Private buoys are protected by the act 1 & 2 Geo. IV. c. 75.

BURDOCK, OR CLIT-BUR, a biennial indigenous plant, common in uncultivated places, the roots of which being esteemed aperient, diuretic, and sudorific, are used in medicine. The roots are collected in spring, and lose four-fifths of their weight by drying.

BURGUNDY PITCH, the resin of the spruce fir (*Pinus abies*), is usually in softish masses of an aromatic odour, and a pale yellowish brown colour, often intermixed with white streaks, and occasionally in rounded masses, or tears, which have spontaneously exuded from and dried upon the trees. This resin is likewise obtained by incision of the bark; the different portions, being collected, are dissolved in boiling water, and cleansed by pressing through canvass cloths. Burgundy pitch is imported from Saxony and the north of Europe. Its only use is as an ingredient in some plasters. Price in bond, 18s. to 25s. per cwt.

Common or spurious Burgundy pitch manufactured in this country is detected chiefly by deficiency in the peculiar odour and viscidity of the genuine resin.

BUSHEL, a British measure of capacity used for seeds, corn, and other dry goods; it is equivalent to 4 pecks, 8 gallons, or to one-eighth of a quarter. The Imp. bushel measures 2218·192 cubic inches, or 36·348 French litres; and the Winchester, or old English standard corn bushel (still employed in the United States and elsewhere), measures 2150·42 cubic inches, or 35·237 litres; hence 33 Winchester bushels equal 32 Imperial nearly. The bushel, heaped measure, formerly used for coals, lime, fish, potatoes, and other commodities, contained 2217·6 cubic inches; but when heaped in the form of a cone above the brim, 2815½.

Besides the Winchester bushel, a variety of other bushels were in use in different parts of England for corn; these differed greatly in size; thus, the Herefordshire bushel contained 10 gallons, the Berkshire bushel 9 gallons, and the Cornwall bushel 24 gallons. In some parts of the north of England, 6 bushels were termed a boll; in others, this denomination was applied to a smaller number of bushels. A detailed account of all these local measures will be found in the Second Report of the Parliamentary Commissioners on Weights and Measures.

BUSS, a cutter-built vessel, in size varying from 50 to 80 tons, employed in the Scotch and Dutch herring fishery.

BUTT, a liquid measure in the old English system. The ale or beer butt contained 108 ale gallons; the wine butt 126 wine gallons. The standard gauge of the butt of sherry is now 108 Imp. galls.

BUTTER (Dan. *Smör*. Du. *Boter*. Fr. *Beurre*. Ger. *Butter*. It. *Burro*. Por. *Manteiga*. Sp. *Manteca*), a substance derived from the oily or creamy part of milk by agitation or churning. It may be obtained either by separating the cream from the milk and then churning it, or by churning the milk and cream together. By the first method the best butter is obtained, by the second the largest quantity. The quality also depends materially on the care with which it is made, and on the nature of the pasture; the best is made from cows fed on rich natural meadows. Butter is extensively made and consumed both in a fresh and salted state in almost all the countries of northern Europe; and in the East it is largely used in the liquid form, called GHEE. The butter of Holland is accounted the best, a pre-eminence which it owes chiefly to the remarkable attention paid by the Dutch to the minutiæ of the dairy, to the purity of the salt used, and especially to cleanliness. The English butter is scarcely inferior, especially that of Epping, Cambridgeshire, Suffolk, Yorkshire, Somerset, Gloucestershire, and Oxfordshire. The best Scottish is that of Clydesdale and Aberdeenshire. The butter produced in Britain is however insufficient for the consumption, and large quantities are imported, particularly from Ireland, where it forms a staple.

The principal dairy counties of Ireland are Carlow, Cork, Fermanagh, Kerry, Leitrim, Longford, Sligo, Waterford, and Westmeath. "Carlow has the reputation of producing the best butter; but the firkins containing that which is manufactured in all the surrounding counties are often branded with the name of Carlow. It is highly esteemed in London, and is often sold for Cambridge butter; but much of the Irish butter is very salt, and sometimes smoky and tallowy. In fact, there are three distinct sorts of butter in the Irish market. The best is sent to Dublin and to England; and from the latter country exported to the East and West Indies. An inferior sort finds a market in Spain; and an inferior still used to be sent to Boulogne" (*Youatt on Cattle*, p. 188). Brazil now takes annually about 30,000 firkins Irish butter.

The quantity imported into Britain from Ireland was, in 1825, 425,670 cwts. No general account of the importations from that country has been kept since that year; but there cannot be a doubt that it has very greatly increased,—probably nearly doubled. In 1838, the declared value of butter and cheese exported was £280,660, of which to West Indies, £108,114; Brazil, £106,221; Portugal, £18,025. In 1838, the quantity of butter imported was 256,193 cwts.; whereof from Holland, 164.314 cwts.; Germany, 74,916 cwts.; Denmark, 14,446 cwts. The importations are annually increasing.

The act 36 Geo. III. c. 86, requires that butter shall be packed and delivered by dealers in a *tub* of 84 lbs. (exclusive of tare), in a firkin of 56 lbs., or in a half-firkin of 28 lbs.; and each sort of butter must be packed separately and salted with small fine salt, and of that no more than is necessary for its preservation. The makers of the casks and the dealers in the butter are to have their names branded on the casks, and the tare or weight of the casks, under penalties; but this act does not extend to butter packed in quantities not exceeding 14 lbs. The shipping of cheese and butter for the London market is regulated by 4 & 5 Wm. and Mary, c. 7; and the butter trade of Ireland, of York, and of other places, is regulated by numerous local acts.

Damaged foreign butter is not to be delivered as grease until after it has been mixed with tar by a Customhouse officer. (*B. O. Feb.* 3, 1832.)

BUTTER-NUTS are the berries of a large tree (*Caryocar tomentosum*) which grows in Guiana, and is called by the natives Tata-Youba. They are covered by a skin two or three lines thick, and consist internally of a buttery yellowish substance, which melts between the fingers, and is sometimes used in cooking instead of common butter. Under the skin lies a stone, within which is a brownish kidney-shaped kernel, very good to eat, and commonly served at table. Butter-nuts are common in the London markets.

BUTTONS (Fr. *Boutons*. Ger. *Knöpfe*. It. *Bottoni*. Por. *Botoens*. Sp. *Botones*). This article is made of an endless variety of materials. In former times it was also made of an endless variety of shapes; but at present these may be reduced to four, viz. buttons with shanks; buttons without shanks; buttons on rings or wire moulds; and buttons covered with cloth or other material. Metal buttons are manufactured on a large scale at Birmingham, both for home consumption and exportation. Except where the taste of foreign countries demands otherwise, these are at present generally made with a well gilt and highly ornamented surface. In the reign of George I. several absurd acts were passed to regulate the kind of buttons to be worn; but these, though still on the statute-book, have been long in disuse. The act 36 Geo. III. c. 6, imposes penalties on the manufacture or sale of buttons marked "gilt" or "plated," and not so gilt or plated in terms of the act.

C.

CABBAGE, a well-known culinary vegetable (*Brassica oleracea*), of which there are almost innumerable varieties. Those most valued for the garden are generally divided into the close-hearting and the spreading; the most common of the former being the York and the Savoys, and of the latter coleworts and Scotch kale. The larger and grosser kinds are sometimes cultivated as food for stock. According to Arthur Young, the average crop on a dry soil is 36 tons per acre; but on a sandy soil, only 18 tons. In Germany, immense quantities of the large white cabbage are manufactured into "that excellent preparation" *sauer kraut*, an article of considerable trade in that country.

CABBAGE-WOOD is obtained from the cabbage-palm (*Areca oleracea*), a tree which grows in abundance in the mountainous parts of the West Indies, and is familiar to all who have read the popular tale of Paul and Virginia. The wood is sometimes used in ornamental furniture; but it does not answer very well, as the ends of the fibres are too hard, and the medullary part too soft for holding glue; the surface is also very difficult to polish, and cannot be preserved without varnish. The trunk, after the centre part is rotted out, forms a durable water-pipe.

CABLE, a long thick rope, employed in the mooring or anchoring of ships. There are generally at least three kept ready for service, namely, the sheet cable, the best bower cable, and the small bower cable, which are each commonly 100 or 120 fathoms in length. Cables are now also formed of iron chains, which are much stronger and more durable than those of hemp. On a rocky bottom, a hempen cable is destroyed in a very short time, while the duration of the other is almost indefinite. It is sometimes desirable to cut the cable when of hemp; this contingency is provided for in iron cables by a bolt and shackle at short distances, so that by striking out the bolt the cable is easily detached. At present, hempen cables are in very little request in the British navy, and even in the merchant service iron has nearly supplanted hemp for this purpose. The regulations of Lloyd's require all vessels under 150 tons to have at least 150 fathoms of chain; of 150 and under 250 tons, 180 do.; of 250 and under 350 tons, 200 do.; of 350 and under 500 tons, 240 do.; of 500 and under 700 tons, 270 do.; of 700 tons and upwards, 300 do.; but in all cases where hempen cables are used, then one-sixth more in length is required. [CORDAGE.]

Cable's-length in navigation signifies 120 fathoms, the usual length of a cable.

CACAO, OR COCOA (Fr. Sp. Por. & It. *Cacao*. Ger. *Kakao*), is the bruised seeds or nuts of the cacao or chocolate tree (*Theobroma cacao*). The seeds are oval, about as large as an olive, and covered with a violet or ash-gray skin which encloses two cotyledons of a fatty nature, and of a brownish-black or violet colour. When simply bruised they constitute the cacao of the shops; reduced to a paste, mixed with sugar, and flavoured with vanilla, they become chocolate. They are imported from the West Indies, Venezuela, Ecuador, and Brazil, in all which places the tree grows wild, or is cultivated for the sake of its seeds. Dr Ainslie states that the cacao is now also much cultivated in the Philippine islands, and that the chocolate made from the nuts, particularly in Zebu, is esteemed even superior to that of Guayaquil in America. Cacao is considered somewhat less nutritive, but much lighter than chocolate. The quantity consumed in the United Kingdom has greatly increased since 1832, when the duty was reduced from 6d. to 2d. per lb. At present from 3,000,000 to 4,000,000 lbs. are annually imported; of which about 1,600,000 lbs. are entered for home consumption; the remainder being re-exported chiefly to Germany, Holland, Belgium, Spain, and Italy.

CADMIUM, a rare metal discovered in 1817, by Stromeyer, in an oxide of zinc (*Annals of Philosophy*, vol. xiv.). In colour and lustre it has a strong resemblance to tin, but is somewhat harder and more tenacious. It is very ductile and malleable. Sp. gr. 8·604. The sulphuret of cadmium has an orange-yellow colour, and would form a useful pigment, could the metal be found in greater abundance.

CAFFISO, an Italian oil measure, equal in Malta to 4⅜ Imp. gallons, and in Messina and Trieste to 2⅓ Imp. gallons.

CAHIZ, a Spanish corn measure, equivalent in Alicant to 6¾, in Aragon to 5, and in Valencia to 5⅜ Imp. bushels; but the standard Avila cahiz of 12 fanegas, used in Cadiz and other places, is equal to 18¾ Imp. bushels.

CAIRNGORM, a name given by lapidaries to an ornamental stone found on the mountain of that name in Inverness-shire. It is a splendid quartz, of various shades and nearly transparent.

CAJEPUT OIL, a valuable volatile oil, limpid, transparent, of a greenish colour, a camphoraceous smell, and an acridly aromatic taste. Sp. gr. 0·927. It is sometimes adulterated with other oils, particularly oil of turpentine. It is prepared in large quantities in the Dutch settlements on the Banda and Molucca islands, from the leaves of the *Melaleuca cajeputi*, and is imported into this country, by way of Holland, in copper flasks. It is used internally as a stimulant and antispasmodic, but more frequently externally as an embrocation.

CALABASH (Sp. *Calabaça*), a name given in the West Indies to a gourd or pompion, the fruit of the *Crescentia cujete*, the shells of which are used by the natives for cups, measures, kettles, and other vessels.

CALAMANCO, a woollen fabric, chiefly manufactured in the Netherlands. It is made plain, coloured, striped, or watered; and the warp is sometimes mixed with silk or goats' hair.

CALAMANDER WOOD, a beautiful fancy wood obtained from a tree which grows in Ceylon. It is extremely hard, and finely veined with different shades of black and brown. Being scarce and very dear, little is imported.

CALAMINE, a native carbonate of ZINC.

CALCEDONY, an ornamental stone, a species of agate of a uniform colour, generally of a milky white or pale yellow, like turbid jelly, often with an internal wavy structure in the form of stalactites, and very commonly with a peculiar mammillary surface. It is found in abundance in the Faroe islands, in Iceland, in Cornwall, and many places of Britain as well as other countries; sometimes in large masses from which cups and other vessels are formed.

CALCIUM, the metallic base of LIME.

CALENDAR. [MEASURES AND DIVISIONS OF TIME.]

CALICO (Fr. *Coton.* Ger. *Kattun.* It. *Tela Bambagina.* Por. *Pano de Algodao.* Sp. *Tela de Algodon*), white, or plain cotton cloth. [COTTON MANUFACTURE.]

CALOMEL, the protochloride of MERCURY.

CALUMBO ROOT (Fr. *Racine de Calumbo.* Por. *Raiz de Calumba.* Ger. *Kolumba wurzel.* Mozamb. *Kalumb*). The calumbo plant (*Cocculus palmatus*) is produced in Malabar, and in the thick forests on the eastern coast of Africa, between Oibo and Mozambo, from which last place the roots form a staple export to Ceylon, and thence to Europe. Calumbo root is generally brought in transverse sections, from half an inch to three inches diameter, rarely divided across; and the bark is of a dark brown colour outside, and bright yellow within. It is very subject to decay by worms; when good it looks bright and solid, breaks with a starchy fracture, and has a faint aromatic odour, and bitter taste.

The root of a Carolina plant (*Frasera waltera*) is imported into Liverpool, and sometimes fraudulently substituted for Calumbo. The American root may be distinguished by its whiter colour, lighter texture, the mixture of longitudinal pieces, and the taste being at first sweetish, and not nearly so bitter as the genuine root. The substance of the tree is besides rendered blue by iodine, the false, brown. Calumbo root is used in medicine. (*Ainslie's Mat. Indica. Duncan's Dispensatory.*)

CAMBRIC (Fr. *Batiste.* Ger. *Kammertuch.* It. *Cambraja.* Por. *Cambraia.* Sp. *Cambrai*), a very fine linen fabric, so called from having been originally manufactured at Cambray, a city in the department Du Nord in France.

CAMEL (Arab. *Djemal*), a ruminating quadruped, of a grotesque form, which has been used from a remote period in eastern countries as the principal beast of burden. There are two species: The Bactrian camel (*Camelus Bactrianus*), characterized by a couple of humps—one on the rump, and another above the shoulders, is employed in Thibet, Turkistan, Tartary, Southern Russia, and in the Pisan territory in Tuscany; the dromedary (*Camelus dromedarius*), with one hump situated on the middle of the back, is indigenous in Arabia, from whence it has spread over the north of Africa, Syria, and Persia; and the intermixture of these two species has produced varieties which are more or less used in different localities. The camel is esteemed by eastern nations one of the most precious gifts of Providence to man; and assuredly, it seems formed by nature for a life of patient drudgery. Justly has the Arab named it the Living Ship of the Desert, as without it he could neither transport himself nor his merchandise across those oceans of sand with which his country is covered. Its spreading cushioned feet, formed to tread lightly upon the dry and shifting soil—the nostrils so formed that it can close them at will to exclude the drift sand of the parching simoom—the powerful upper teeth for assisting in the division of the tough prickly shrubs and dry stunted herbage of the desert—and above all, the cellular structure of the stomach, which is capable of being converted into an assemblage of water tanks,—bear ample testimony to the care manifested in the structure of this extraordinary quadruped. The camel is weaned at the commencement of the second year, and begins to propagate when four years old, though it does not complete its full growth until the age of twelve. It will live as long as forty years; but after twenty-five or thirty its activity begins to fail. Camels are content with the coarsest food—a bunch of dry grass or the stunted shrubs of the wilderness. Their ordinary food is a ball of paste (*maabouk*), weighing about a pound, made of barley meal and water, which each receives in the evening; and this is all the daily expense of these useful creatures. The value of the camel depends of course on its kind and quality. In Hejaz, Burckhardt states the price of a good one to be £14, but they sometimes cost £35; and as much as £70 has been paid for one of the Oman breed.

Camels are used both for riding and carriage, for which purposes they are employed in large numbers in the Eastern caravans. [CARAVAN.] The first thing that an Arab examines about his camel, when preparing for a long journey, is the hump, which is an infallible criterion as to the ability for exertion; for whenever it subsides the beast gradually yields to fatigue. A long journey will cause the hump almost entirely to disappear: it is easily restored, however, by a few weeks of good nourishment and repose. The favourite pace of the riding camel is a kind of amble at the rate of 5 or 5½ miles an hour. Many fabulous stories are related of the swiftness of this animal, but it never approaches even for short distances to that of a common horse, though it is perhaps unrivalled for the ease with which it will despatch an uninterrupted journey of several days and nights if allowed its own natural pace, and not employed on hilly, woody, or slippery ground. The load of the carriage camel in common cases is from 400 to 500 lbs. for a short journey, and from 300 to 400 lbs. for one of any considerable distance. The capability of bearing thirst varies among the different races. In the caravans from Darfûr they travel nine or ten days without water; but the Anatolian camel requires drink every second day.

CAMEL-HAIR (Fr. *Poil de chameau.* Ger. *Kameelhaar.* It. *Pelo di camello*), is imported into the United Kingdom from the Levant, principally for the manufacture of pencils for the painter. That produced in Persia is held in the highest estimation. The black hair is most valued, next the red, and the gray brings only half the price of the red. In the East camel-hair is woven into clothing and even tents, purposes to which it has been applied from a remote period.

CAMLET (Fr. *Camelot.* Ger. *Kamelot.* It. *Ciambello*) was originally a rough fabric made of the hair of the camel and the goat interwoven, which was used by ascetics. That of the East is made of the hair of the Angora goat. English camlet, however, is a light stuff made of long wool hard spun, sometimes mixed in the loom with cotton or linen yarn.

CAMPHOR (Du. *Kamfer.* Fr. *Canfre.* Ger. *Kampfer.* It. & Por. *Canfora.* Sp. *Canfor.* Arab. & Pers. *Kafoor*), a peculiar vegetable principle arising from the separation of the volatile oil of different trees, which is used in medicine and the arts. Two kinds are distinguished in commerce:—

China or *Java Camphor*, the only kind met with in Europe, is the product of the *Cinnamomum camphora* (Nees Von Esenbeck), found in Quang-tung and Fokien in China, in Cochin China, and in Japan. It is extracted from all parts of the tree, but chiefly from the roots, and is obtained in the state called *crude camphor* merely by sublimation. In this state it is generally imported, and is afterwards refined by mixture with lime and a second sublimation. Crude camphor occurs in small brownish or gray grains mixed with impurities. Refined camphor is a very white, soft, semitransparent substance, having a crystalline appearance, a strong and fragrant odour, and a hot pungent taste; very inflammable, and so volatile as totally to exhale when left exposed in a warm air. Sp. gr. 0·985: it occurs in round cakes, each weighing about 2 lbs., and is commonly packed in vessels containing nearly 250 cakes. The quantity of camphor exported from Canton varies much from year to year. In the United Kingdom about 650 cwts. are annually entered for home consumption.

Malay or *Baroos Camphor* is found in great purity concreted among the woody fibres of the *Dryobalanops camphora*, growing in Borneo, Sumatra, and the Malayan Archipelago. As an article of commerce it is found exclusively in the East, and particularly at Canton, where it fetches a price equal to about 100 times that of the article made from their own *C. camphora.* The former is far more fragrant than the latter, but whether it possesses any superior virtues is exceedingly doubtful.

CAMPHOR-OIL is a limpid fluid which exudes from the *Dryobalanops camphora.* It is much used in some parts of the East, but is not brought to Europe. It is as agreeable as the concrete substance, and almost as cheap as spirits of turpentine. If by any contrivance it could in Britain be reduced to a concrete state, as has lately been done with the oil of the cocoa-nut, the produce might be advantageously exported to China, and perhaps retained in part for home consumption.

CAM-WOOD, a red dye-wood of a very fine colour, obtained from a tree principally found in the neighbourhood of Sierra Leone. It is chiefly used in turnery for knife handles and similar articles. About 1000 tons are annually entered for home consumption.

CANADA BALSAM, a fine species of turpentine, obtained from the *Pinus Balsamea.*

CANADA, the most important portion of British America, lies nearly all between the Hudson's Bay Territories and the United States, and, within the basin of the river St Lawrence, from about 42° to 52° N. lat. It was colonized by the French in 1608, and conquered by the British in 1759. There are two provinces, separated by the Ottawa river:—*Lower Canada*, adjoining the estuary of the St Lawrence; area, 250,000 square miles; pop. (1836) 664,631, chiefly of French origin; capital, Quebec, pop. 30,000. *Upper Canada*, contiguous to the great lakes Ontario, Erie, Huron, and Superior; area, 105,000 square miles; pop. 371,332, chiefly of British origin; capital, Toronto, pop. 9765. Each province had formerly a governor, executive and legislative councils, and a house of representatives,—the governor of the lower province being likewise captain-general of all British America; but, by the act 3 & 4 Vict. c. 35 (1840, July 23) of the Imperial Parliament, the two provinces have been united.

Canada, though in some parts hilly, is upon the whole a level and well-watered country. The located portions are mostly confined to the banks of the St Lawrence, the lower part of the Ottawa, the N. margin of the Lakes Ontario and Erie, and the S. E. banks of lakes Huron and St Clair, which are generally fertile. Beyond these districts, the country, more especially towards the N. and W., is very imperfectly known. The climate is salubrious, and heat and cold, though felt in their extremes, are not oppressive, owing to the purity of the atmosphere. In the lower province, the medium of cold in winter is about 15° Fahr., its maximum about —20°; and the medium summer heat is from 75° to 80°, its maximum 103°. Early in December the St Lawrence is closed by ice, which seldom totally disappears before the first week in May. The five months from May to September, inclusive, comprise the spring, summer, and autumn of the Lower Canadian year. At Montreal, and in the Upper Province, the spring commences from six weeks to two months earlier, according to its latitude, and the climate is in every respect milder; indeed, in the W. part of Upper Canada, the duration of frost and snow is not more than half, or even one-third, as long as in Quebec. The severity of the Canadian winter is much less unfavourable to the operations of agriculture than might at first appear. The snow effectually prevents the frost from penetrating deeply into the earth, and the rapid progress of the spring thaws, followed by frosty nights, pulverizes the soil, and helps to prepare it for seed. Against the severity of the winter, must also be set down the steady weather which prevails during summer in both provinces, and which renders the progress of vegetation so rapid, that the Canadian harvest is early, and almost always secured before bad weather commences. Hence the climate of Canada, severe though it is, presents no obstacle to the unlimited extension of almost every description of produce, except such as is peculiar to a tropical climate.

The Canadians are scattered over a vast extent of country, some parts of which are 800 or 900 miles distant from the port of Quebec, and 600 or 700 from that of Montreal. But owing to the facility of communication by means of lakes and rivers, the expense of transport is comparatively small; and, from the improvements which are taking place in railroads and canals, this expense will soon be greatly reduced. The St Lawrence is navigable for large ships to Montreal, about 600 miles, and to Quebec, 420 miles, for ships of the line; above Montreal, its current is broken by rapids. The Ottawa and Saguenay, the principal tributaries of the St Lawrence, are only partially navigable, having their course likewise interrupted by falls and rapids. The principal canals are the Grenville and Rideau canals, which, in connexion with the river Ottawa and the La Chine canal, form a vast chain of internal navigation, reaching by a circuitous line from Montreal to Kingston. The Welland canal, a most important work, connects lakes Ontario and Erie, avoiding the Falls of Niagara. Besides these there are various smaller canals and railroads, both in the Upper and Lower Provinces.

The culture of the soil is the principal occupation of the people; a circumstance which almost necessarily follows from the abundance of rich land and the total absence of taxes; for these advantages more than compensate the high price of labour. The chief agricultural product is wheat, the crop of which is estimated at 11,000,000 bushels. The average export of wheat and flour by sea, in the four years 1832-1835, was equivalent to 780,000 bushels, besides which, a considerable quantity from the Upper Province found its way to the United States; but in 1836 it was much smaller; amounting only to 18,125 barrels flour, and 9716 bushels wheat. The quantity of other articles of agricultural produce has been hitherto inconsiderable; the most important are flax, tobacco, and salted provisions.

The staple exports of the colony, however, are timber and ashes. The former is the principal; but as a portion of the trade is the result of a legislative monopoly arising out of the high duties in the United Kingdom on foreign European timber, with low duties on Canadian, that portion can last only as long as the monopoly is maintained. The chief articles of timber exported to the United Kingdom and the colonies in 1836, were,—oak, 22,805 tons; elm, 18,733 tons; pine, 315,967 tons; 6,707,278 staves, chiefly puncheon and standard pieces; deals, deal-ends, battens, boards, and planks, 2,785,520 pieces; besides ash and birch timber, hoops, handspikes, and smaller articles; the whole amounting in value to £703,165. Besides the timber carried by sea to the United Kingdom and West Indies, there is a considerable quantity of boards, scantling, and other sawn timber, prepared for the United States and for home consumption. The timber-trade of Canada with the West Indies and the United States, as it exists without protection, cannot be affected by any change of the duties. On the other hand, the advantage which the colony now enjoys with the mother-country may be destroyed by the removal of those restrictions by which it was originally created, and which is at present contemplated. It would exceed the limits of the present article to describe the effects which are likely to result from this change. The prevailing opinion is, that Canada has other means of employing her labour and capital independent of the timber-trade, and that the change will be beneficial not only to the mother-country, but to the colony. The clearing of the land from wood to fit it for cultivation, gives rise to the production of pot and pearl ashes. The usual course is to burn the timber on the ground, and if the price be remunerating, the wood ashes are converted into the ashes of commerce. If, however, the rate be discouraging, they are harrowed in for the improvement of the soil. The quantity shipped is annually about 36,000 barrels, consisting of about two-thirds pot and one-third pearl ashes. Of late years this trade has been on the decline.

The fisheries of Canada form a subordinate branch of industry; but still the gulf and lower portion of the St Lawrence furnish a considerable quantity of fish and oil for home consumption, and leave a small surplus for export. The produce of the fisheries in the county of Gaspé and the Magdalen Islands in 1836, consisted of—cod, 100,542 cwts.; cod oil, 37,162 gallons; whale oil, 25,120 gallons, besides salmon and other fish, the whole amounting in value to £86,624.

Montreal was formerly the emporium of a very considerable portion of the fur trade, which was carried on by two rival companies,—the Hudson's Bay and the North-west. After the failure of the latter association, most of the skins were carried direct to the residents at Hudson's Bay, who have an establishment also at La Chine, near Montreal. But although not a single bale of furs were shipped from that city, we should be justified in ranking the fur-trade among the resources of Canada, because a large importation of British goods takes place through Montreal, and wages are paid to the hunters by drafts on the company in London. There is, however, a small though not an increasing exportation of this article from Montreal, consisting chiefly of skins of the musk-rat, martin, beaver, and otter.

Of manufactures, the principal is that of ashes, already noticed. The others are as follow:—Cloth, a kind of gray homespun or *étoffe du pays*, worn by the *habitant* or farmer of Lower Canada; coarse cotton, but only in small quantities; coarse linens; carpets and mats formed of threads obtained from old materials; straw hats; worsted stockings and socks; caps; leather mittens; iron wares at St Maurice; nails; maple sugar; bricks; while soap, candles, leather, linseed-oil and cake are manufactured to an extent sufficient to furnish a surplus for exportation. Whisky is largely produced in both the Canadas. Starch, blue, cider, cordage, paper, and a few other articles are also made, but in very small quantities. It is to be observed that these manufactures, with the exception of whisky, exist almost wholly without protection. But the domestic manufactures are supported more by the habits of the people than by cheapness; in fact the *étoffe du pays* is imitated in Britain at a much lower price than the Canadian cloth usually sells at in the native market.

Shipbuilding is an important employment in all the N. American colonies. The average number of vessels built annually in Canada, during the 11 years ending 1835, was 26, and their tonnage 8249. These ships are built of oak, and are of much better workmanship than those of New Brunswick and Nova Scotia, which for the most part are constructed of pine.

The imports chiefly consist of British manufactures, principally cottons and woollens; in 1836 the former amounted in value to £472,892 sterling, the latter to £303,166. The woollens are mostly of the coarser and warmer sorts, such as blankets, flushings, flannels, and the coarse cloths produced in the manufacturing towns of Yorkshire. The cottons are chiefly power-loom shirtings, striped and checked cloths, printed calicoes, ginghams, muslins, cambrics, and also fustians, velveteens, and similar fabrics. The other articles of British produce or manufacture imported in 1836 were as follow:—Hardware, value, £74,249; wrought iron, £56,298; unwrought iron, £35,345; linens, £61,082; silks, £59,488; British refined sugar, £49,628; glass, £84,069; haberdashery, £71,646; earthenware, £15,606; apparel and slops, £33,975; painters' colours, £17,426; besides coals, leather, books, candles, soap, stationery, salt, lead, cordage, hats, and a variety of other goods.

The other imports are principally composed of the following articles:—tea, about 680.000 lbs., brought chiefly from Britain; raw sugar, about 3,000,000 lbs. (maple sugar being extensively grown in the colony); rum, 330,000 galls.; brandy and gin, 220,000 galls.; wine, nearly 3500 pipes, namely, port, 500; madeira, 200; sherry, 200; Teneriffe and other low white wines, 700; Spanish and other low red wines, 1600; French and German, 300. London enjoys the chief part of this trade to Canada, as there is a discriminating duty of £7, 7s. per tun of 252 galls. on wines "direct from the place of growth." A considerable quantity of low white and red wines is also brought from the Mediterranean, after having been landed at Gibraltar; an expedient by which the high duty is evaded. The West India produce is for the most part imported direct from the place of growth, and chiefly from Grenada, Jamaica, and Demerara. Halifax in Nova Scotia has recently become an entrepôt for exchanging the productions of Canada and the West Indies; the former paying for her purchases in flour and other provisions. St John's in Newfoundland also enjoys a small inter-colonial trade.

The inland trade with the United States is considerable. A portion of the ashes, flour and other provisions consumed in Canada, are derived from thence. In early spring, teas, coffee, fruits, tobacco, and various groceries, are imported from New York by the way of Lake Champlain. The exports at St John's, on that lake, the chief seat of this trade, amounted, in 1832, to £8197; the imports to £146,807. In 1833, the former were £20,500, the latter £104,500. Of the imports fully two-thirds consisted of agricultural produce, all, it is said, required for Canadian consumption. An intercourse with the United States is also carried on from different points in Upper Canada, the duties on which amounted, in 1835, to above £10,000. Of this there were paid at Toronto, £3750; Kingston, £1517; Burlington, £1438; Port Stanley, £835; Brockville, £549. When commodities are exported on American account, the transmission of a bill of exchange on New York easily closes the transaction. Shipments are also made to the West Indies from that city, as well as some of the more southern towns, by order of Canadian houses. These are usually paid for by drafts on London.

The total imports into Lower Canada in 1836 amounted in value to £1,941,053 sterling; and the exports to £1,034,514 sterling. These sums, however, do not include the extensive illicit trade which is carried on with the United States. The chief ports of the colony are Quebec and Montreal, both being warehousing ports, and the former a "free port" under the act 3 & 4 Wm. IV. c. 59.

Quebec is a strongly fortified city on the north bank of the St Lawrence, in 46° 49′ N. 71° 16′ W. It is divided into two parts; the Lower Town, where are all the commercial establishments, is situated immediately under Cape Diamond, nearly on a level with the water; the Upper Town is on a rock 200 feet above; and the communication with the lower town is maintained by a winding street, at the top of which is a fortified gate. The basin of Quebec is very spacious, being sufficient to contain 100 sail of the line. In 1836, 1146 ships entered this port, having a tonnage of 344,206; of which Great Britain, 880 ships, 291,235 tons; British colonies, 174 ships, 22,393 tons; United States, 50 ships, 19,619 tons; foreign states, 42 ships, 10,959 tons.

Montreal, in 45° 30′ N. 73° 30′ W., lies about 180 miles above Quebec, on the south side of the island of Montreal, which is formed by the confluence of the St Lawrence and the Ottawa; pop 35,000. Vessels of 600 tons come up to it. The harbour is not large, but is always secure; the greatest disadvantage is the rapid of St Mary, about a mile below the town. Montreal is the commercial capital of Canada, being favourably situated for the lumber trade. and for intercourse with the Upper Province and the United States. Most of the business, even in Quebec, is carried on by branches from its mercantile houses. In 1836, there entered this port 98 ships, 22,289 tons; of which Great Britain 73 ships, 19,410 tons; British colonies 23 ships, 2392 tons; foreign states, 2 ships, 487 tons.

MEASURES, WEIGHTS, MONEY, DUTIES, &c.

Measures and Weights are those of Great Britain, but with the old English measures of capacity. The *minot*, sometimes used in Lower Canada, is an old French measure, 90 of which are commonly estimated at 100 English or Winchester bushels, although the true proportion is 90 to 98.

Money and Exchanges.—Accounts are kept and sales and purchases are made in pounds, shillings, and pence, *Halifax currency*, which is about 20 per cent. inferior to British, though the denominations and proportions are the same. The pound currency is four Spanish dollars, each dollar being called 5s. But the average value of the dollar in the London market is only 4s. 2d.; hence 4s. 2d. sterling = 5s. currency; or 16s. 8d. sterling = £1 currency; or £100 sterling = £120 currency. The comparison of exchange is, however, complicated, by the assumption of a par departing widely from the value of the currency. This erroneous par is 4s. 6d. taken as the value of the dollar, or £90 sterling equal to £100 currency; the rule being, add *one-ninth* to sterling to obtain currency. To make up the difference between the erroneous par and the average value of the currency,—say the approximate par,—it is necessary to make use of a nominal premium of exchange. Thus, when exchange is really wholly undisturbed, or, in other words, at par (£100 sterling selling for £120 currency), it is said to be at 8 per cent. premium. For example, bill on London, sterling £100; add premium 8 per cent. £8, makes £108; adding also *one-ninth*, £12, we have £120 currency = £100 sterling. The better way would be to quote the dollar, or the pound, or the £100, at what each is respectively worth. Government exchange is thus quoted, so are sovereigns. The commissary-general of Canada quotes his drafts at 4s. 2d. or 4s. 1½d. per dollar, as the case may be; that is, on being paid so many times 5s. currency, he will deliver a bill on the treasury of as many times 4s. 2d. or 4s. 1½d. sterling. Sovereigns are quoted in the Canadian price-lists at 24s. currency (more or less). Thus, 4s. 2d. sterling per dollar; 24s. currency per sovereign; exchange at 8 per cent. premium; and £100 sterling = £120 currency, all mean the same state of the exchange. Fluctuations in the rate of exchange of course revolve round the nominal premium of 8 per cent. as around a pivot, so that 6 per cent. premium is in fact 2 discount, and 10 per cent. only 2 premium. The circulating medium is chiefly composed of British and American coins, and of notes circulated by the various banks. No paper is issued by the government or on the credit of the colony.

The Banks in 1836, in the Lower Province, consisted of the Montreal Bank, with a capital of £250,000; the (Montreal) City Bank, capital £200,000; the People's Bank, capital paid up £75,000; and Quebec Bank, capital £75,000. Those in the Upper Province were four in number:—The Bank of Upper Canada, with a capital of £200,000, that of Kingston, or the Midland District, with a capital of £100,000, together with the Agricultural and People's Banks, the paid up capital of which was probably £100,000 more. The Bank of British America, established in London in the year 1836, has also branches in various places. Most of the provincial banks are instituted on the American principle of limited liability.

Tariff.—The duties on imported goods levied in Canada are imposed partly by the authority of the British government, and partly by that of the colonial legislature. The former are called *crown duties*, and the latter *provincial duties*; the first being in sterling money, the latter in currency. In charging the duties, the dollar is received at 4s. 4d., which is 2d. less than the old par, but 2d. more than its real value. The provincial duties have no object besides the increase of revenue, not discriminating in any way between the sources of supply. The crown duties, on the other hand, seem to be framed rather for the purpose of forcing the trade into particular channels, than for simple revenue; and the royal receipts are certainly trifling compared with what they would be were the imports equalized. The provincial duties are, on spirits, 6d. per gall.; Madeira wine, 9d. per gall.; other wines, 6d. per gall.; molasses, 5d. per gall.; coffee, 2d. per lb.; sugar, raw, ½d., refined, 1d. per lb.; teas, hyson, 6d., bohea, 2d., all others, 4d. per lb.; tobacco, manufactured, 3d., leaf, 2d. per lb.; snuff, 4d. per lb.; salt, 4d. per minot, which is drawn back if reshipped for fisheries; goods, wares, and merchandise not specified (including nearly all British manufactures), 2½ per cent. *ad valorem*. The crown duties are not levied on British produce and manufactures. On foreign wine, (except French wine) the crown duty is 10s. per tun in wood from the United Kingdom, Malta, and Gibraltar, and £7 per tun from place of growth; on British plantation rum 6d., and foreign spirits 1s. per gall.; tea and British plantation sugar and coffee are free. On most other articles the 3d and 4th Wm. IV. c. 59, imposes duties of 7½, 15, 20, and 30 per cent.; but, as in general they amount to a prohibition, they are seldom levied. The duty of 7½ per cent. is occasionally paid, but the excess only is levied; so that when the goods are liable to the provincial duty of 2½ per cent., 5 per cent. only is payable to the crown. [COLONY. EMIGRATION.]

CANAL, an artificial channel of water, adapted to the easy conveyance of goods in boats or barges, also sometimes for the purposes of irrigation and the supplying of towns with water. Navigable canals have existed since a very remote period, but were principally confined to the low countries adjacent to the alluvial deltas of large rivers, such as the Nile, the Euphrates, and the great Chinese rivers, and in Europe the Po and the Rhine. In such countries, indeed, nature may be said to have pointed out this method of communication, as in every way the most convenient and simple. In Holland, the canals answer all the purposes of highways, and may be likened in their number and utility to the turnpike roads of England; but as a pecuniary investment, the former yield an immense income to government, while the returns of the latter are barely sufficient to keep them in repair. The canals of Holland are mostly formed in straight lines; and the country being quite flat, they are constructed very simply, and without any of the costly expedients of deep cutting, embanking, or tunnelling. The lock, which is an indispensable appendage to canals in this country, is comparatively a modern contrivance, having been first applied in Italy towards the end of the fifteenth century. The vast extent of water communication in China has no locks even to this day. As a substitute they have inclined planes of stone, over which they haul the vessels and launch them again in the upper level; thus applying main force to accomplish what is effected in the lock by simply letting in the water from the upper level into the trough, and thereby raising the enclosed barge.

The first efforts of any consequence that were made in this country towards extending inland navigation, took place about the beginning of last century, and by the middle of it 40 acts had been obtained for improving and extending the navigation of some of the principal rivers in England. Experience showed, however, that navigation of this kind was liable to continual waste, and the works subject to destruction by floods. These difficulties suggested (in 1757) to the proprietors of the Sankey navigation in Lancashire the expediency of substituting a new cut alongside Sankey brook, instead of making the latter navigable. But it was the Duke of Bridgewater that first aroused public attention to undertakings of this kind, by a canal which he formed to convey coal from one of his estates at Worsley to Manchester, about nine miles distant. The novel features of this work consisted then (1759) in its taking a direction away from all natural water courses, passing boldly across the river Irwell, at a height of 40 feet above it by means of an aqueduct 600 feet long, and tunnelling through the solid rock of a large hill to reach the mouths of the coal pits. This canal and many others were executed at the private expense of the Duke of Bridgewater, and completed with wonderful skill and ingenuity by Brindley, his grace's engineer. The signal success which attended these undertakings, opened the eyes of the nation to the advantages to be derived from still-water navigation; and extensions from the river Mersey to the Trent, Severn, and Thames, quickly followed. These, and the rapid formation of joint-stock companies, of which upwards of 100 have been incorporated for works of this sort, are evidence of the zeal with which such improvements have been prosecuted. Mr Telford, in his autobiography, mentions as an instance of the eagerness of the public about 1790 for canal speculations, that at the first general meeting of the promoters of the Ellesmere canal (112 miles long, and connecting the Mersey, Dee, and Severn), four times the estimated expense was at once subscribed without hesitation.

In England, about 2400 miles of navigable canals have now been made, and wholly at the expense of private companies or individuals; in Ireland, 300 miles; in Scotland, 200. These works are unequalled for extent, and for difficulties of all sorts successfully overcome. As specimens of the latter may be mentioned the tunnel at Blisworth, on the grand Junction canal, which is 3080 yards in length. The underground cuttings in the Duke of Bridgewater's canal are said to be altogether 18 miles long, and to have cost £170,000. The Marsden tunnel, in the Huddersfield canal, is 5451 yards long. The tunnel at Sapperton, in the Thames and Severn canal, is 2½ miles in length, and 250 feet below the highest point of the hill through which it is made. In the Thames and Medway canal, between Gravesend and Rochester, a tunnel 2¼ miles is cut through the chalk; and one of the tunnels of the Leominster canal at Pensax is 3850 yards long.

In the planning of canals, the first object is to select a line that conforms best with the levels and natural drainage of the country, so as to have as few locks as possible, and a plentiful supply of water to them at all seasons. The latter has to be regulated in a great measure by the amount of trade, or number of barges that pass the locks, and the water must be supplied at the highest part of the canal; but the greater part of the waste is generally owing to loss by leakage through the gates, absorption through the ground, and evaporation. It sometimes happens that the adjacent streams are insufficient in dry seasons, or their water is taken off for mills; in such cases, reservoirs must be constructed with weirs and sluices at a great expense. To prevent loss by absorption, the whole extent of the canal is lined with a clay puddle, impervious to water; and in embankments, vertical layers, or sunk walls of the same material, are generally placed at each side as further security.

The expense of constructing canals depends so much upon local circumstances that it is impossible to give data of general application. Some idea, however, of the relative proportion which one part of the work bears to another, may be had from the following abstracts of estimates by Mr Baird and Mr Telford.

Edinburgh Union Canal, 32 *miles*. (Mr Baird.) Cutting, embanking, puddling, towing paths, £71,000; bridges, aqueducts, tunnels, drains, £84,000; land, £23,000; fencing, £5500; nine locks, rise 110 feet, £17,000; reservoirs, £12,000; total, £212,500.

Leicestershire and Northamptonshire Canal, 42 *miles*. (Mr Telford.) Cutting, &c., £130,000; bridges, &c., £65,000; land, £18,000; fencing, £6700; total, £219,700.

The rise effected by a lock varies from 4 to 12 feet, according to circumstances, but seldom exceeds 8 feet. The expense appears from Mr Telford's estimates to vary in general from about £120 to £180 per foot rise.

The facilities of transit that are afforded by canals seem as yet to be confined to low rates of speed. Careful experiments, made with barges, proceeding at from one to four miles an hour, have shown that the resistance increases rather faster than the square of the velocity. At four miles an hour the power necessary to pull along ordinary loaded barges is 1-317th of the gross load, while at two miles per hour it diminishes to 1-1200th only. On a good level turnpike road the power requires to be 1-30th of the load, and on level railways about 1-220th; but they remain the same at all velocities. Thus at a speed of about 11 miles per hour the same power will pull along the same load on a canal as on a turnpike road; and a similar equality of advantage exists between a canal and a railway at a speed of 4½ miles per hour. Below this rate the canal has the advantage of the railway in point of economy; above it the railway has the advantage of the canal.

The stimulus given to internal intercourse by the success of railways, and especially the fears entertained by canal proprietors of the injury that their property was likely to sustain by their general introduction, has urged them of late, however, to effect considerable improvements in the construction of passage-boats; though as yet steam-vessels have not been introduced with success. Experiments made by the Forth and Clyde Canal Company have proved that a rate of velocity may be attained with horses, which at one time would have been deemed quite chimerical. This has been accomplished by extremely light barges called *swift boats*, weighing only from 2 to 3 tons, and made very narrow so as to penetrate the water easily, and produce little disturbance. Their use is principally confined to the canals between Edinburgh, Glasgow, and Paisley; and their usual rate is from 8 to 9 miles the hour, *not* including stoppages or passing of locks. They carry from 80 to 90 passengers each, weighing with luggage from 5 to 6 tons. They perform the distance (56 miles) between Edinburgh and Glasgow in 7 hours. On the Grand Junction canal, between London and Birmingham, *fly boats* are employed, which average a speed of 4 miles per hour: they weigh from 7 to 7½ tons, and carry from 10 to 15 tons of goods. The ordinary heavy boats are dragged at the rate of from 2 to 2½ miles the hour: they carry 20 tons of goods, and weigh 6½ tons; others carry 24, and weigh 9 tons. [STOCKS.]

Table of the cost of conveying goods and passengers on canals at different rates of speed. (*Wood on Rail-Roads*, p. 678; 1838.)

Description of Boats.	Rate of speed in miles per hour.	Resistance in fraction of load.	Cost of haulage per ton per mile.	Cost of boat-hire per ton per mile.	General Expenses per ton per mile.	Aggregate Charges.	
						Useful load per ton per mile.	Gross load per ton per mile.
			d.	*d.*	*d.*	*d.*	*d.*
Slow boats	2½	$\frac{1}{560}$	0·18	0·32.	0·86	1·36	1·02
Fly boats	4	$\frac{1}{317}$	0·50	0·66.	2·34	3·5	2·275
Swift boats	10	$\frac{1}{40}$	0·275 per passenger. 3½d. per ton.		9·7	1·08 per passenger. 13½d. per ton.	10*d.* per ton.

CANARY ISLANDS, a group belonging to Spain, situated in the Atlantic, off the coast of Morocco, between 27° 40′ and 29° 30′ N., and 13° 30′ and 18° 20′ W. The inhabited islands and their population (1837) are Teneriffe, 85,448; Canary, 72,779; Palma, 33,098; Lanzarote, 17,714; Fuerteventura, 14,096; Gomera, 11,722; Hierro, or Ferro, 4481; total, 239,338. The seat of the governor-general is at Santa Cruz, the port of Teneriffe, in 28° 29′ N., and 16° 15′ W.; pop. 8500. The other chief towns are Laguna and Orotava in the same island, and Las Palmas in Canary.

The aspect of the Canaries is, throughout, elevated, and some of the mountains, particularly the Peak of Teneriffe, rank among the loftiest in the globe. The sides of the mountains inclining towards the W. and N. exhibit, rising above each other, the plants of the torrid, the temperate, and even the frigid zone. The islands are within the limits of the trade-wind, and the climate eminently salubrious. The most fertile are Canary and Teneriffe; Lanzarote and Fuerteventura are dry and sandy. About one-fifth of the surface of the whole islands is under cultivation. In a late consular return, the principal productions in one year are stated to be, wine, 46,226 pipes; potatoes, 151,800 quarters; wheat, 57,487 qrs.; maize, 39,876 qrs.; barley, 66,282 qrs.; rye, 5343 qrs.; vegetables, 10,310 qrs.; barilla, 114,000 quintals; and orchilla, 1498 quintals. A small quantity of sugar is made, and there are manufactures of coarse linens, cloths, and silks. Domestic animals are plentiful. An active commercial intercourse exists among the different islands, and upwards of 30 vessels are employed in the fishery on the coast of Africa. The staple export is wine, particularly that called "Teneriffe," the better sort of which is equal to the middling kinds of Madeira, for which it frequently passes in England. In 1833, there were exported 3561 pipes from Santa Cruz, of which, 1855 were sent to London, 968 to Hamburg and Bremen, 405 to the United States, and 181 to St Thomas; but the total export of wine from the islands in that year was 8684 pipes. The chief of the other exports are barilla, cochineal, orchilla, fruit, and raw silk, with small quantities of brandy, vinegar, rock-moss, and tunny-fish. The imports consist of sugar, coffee, brandy, oil, leather for soles, wax, and a variety of manufactured goods. The amount of exports in 1833, according to the tariff valuation, was, to Spain, £34,206; America, £4693; other countries, £65,224; total, £104,123; and imports from Spain, £29,047; America, £11,885; other countries, £128,592; total, £169,524. The imports of British and Irish produce and manufactures, amount annually to about £40,000; chiefly consisting of cottons and woollens, linens, iron, hardware, cutlery, glass, soap, earthenware, hats, and apparel. Foreign wheat, India piece goods, and brandy, are likewise imported from this country. In 1838, 38 British vessels arrived at Santa Cruz, Teneriffe; 13 at the port of Orotava; 8 at Arecife in Lanzarote; and 12 at Port of Palmas in Canary.

The Canaries are frequently visited by ships for fresh provisions, which, except vegetables, may be obtained plentifully in most of the islands. There is, however, no accommodation for ships except open roadsteads, which are unsafe in winter.

Measures, Weights, and Money, same as SPAIN.

CANARY SEED is the produce of an annual grass (*Phalaris Canariensis*), chiefly cultivated near Sandwich in Kent; an acre yielding from 3 to 5 quarters. It is used extensively for the food of tame singing-birds.

CANARY WOOD, a fancy wood of a golden-yellow colour.

CANDIA, OR CRETE, one of the largest islands in the Mediterranean, is situated to the S. of the Grecian Archipelago. Length, 160 miles; breadth varying from 6 to 35. Population 300,000. Capital, Candia, in 35° 21′ N. 25° 3′ E.; pop. 12,000. The island forms a Turkish pashalic.

The coast, especially towards the N., is indented by deep gulfs; on the S. it is rugged and iron-bound; and a continuous mass of high land runs through the whole length of the island. The soil is fertile, producing corn, especially barley, oil, honey, and wine, besides considerable quantities of cheese, wool, wax, silk, valonia, carobs, and a variety of fruits. The principal exports are, white soap (50,000 cwts.), sent chiefly to Turkey and Greece, oil, silk, raisins, carobs, valonia, almonds, chesnuts, oranges, lemons, and linseed; and the imports, grain, rice, cottons and piece goods, timber, leather and hides, tobacco, sugar, barilla, butter, salt fish, and other articles; the whole amounting annually to about £130,000 sterling. The chief commercial intercourse is with Turkey, Greece, Austria, and Egypt. According to a recent consular return, the average annual value of British manufactures and metals imported is about £22,000; consisting of cotton twist, 70,000 lbs.; gray callicoes, 4000 pieces; madapolams, 3500 pieces; long cloths, 500 pieces; imitation shawls, 8000 pieces; nankeens, 30,000 yds.; muslins, 2500 pieces; prints, 1200 pieces; cambrics, 1500 pieces; printed shawls, 500 doz.; iron, 600 quintals; shot, 100 sacks. The most frequented port is Canea. Retimo has also a small harbour. That of Candia is much decayed, and nearly filled up. These three principal towns are all situated on the N. side of the island.

Measures and Weights.—The pic or ell = 25¼ Imp. inches; the dennum is about 40 sq. yds.; the mistach of oil about 3 Imp. galls.; the mistach of wine varies from 3 to 5 galls.; the corn measure is the carga = 4·19 or nearly 4¼ Imp. bush.; the oke = 2¾ lbs. avoird.; and the quintal = 126 lbs. avoird. A mule or horse load (by which some duties are reckoned) weighs about 2¼ cwts.; an ass load 1¼ cwt.

Money.—40 paras = 1 piastre; and 100 piastres = £1 sterling nearly.

CANDLE. Candles are manufactured from tallow, bleached bees'-wax, spermaceti, the concrete part of cocoa-nut oil, and lately the concrete part of tallow has been separated by pressure from the oil, and made into candles, under the name of *stearine*. They are also made from mixtures of the preceding, and called composition, imperial wax, &c. Candles are always cylindrical, and have a wick formed of fine cotton in the centre. The use of the wick is purely mechanical; when lighted it first melts the solid candle, which, being drawn by capillary action, is diffused over the fibres of the wick, and thus prepared for decomposition and combustion. The quality of the candle depends very much upon the wick, as if too thin, it will melt more than the fibres can decompose, and the candle will *run;* if, on the other hand, the wick be too thick, the candle will smoke; owing to the melted part not being in a perfect state of combustion, for want of air at the centre of the wick. Wax and sperm, from being less fusible than tallow, are made with a much more slender wick, which, bending over, is consumed by the oxygen of the atmosphere, and therefore requires no snuffing. The best tallow candles are always firm and white. Wax candles, on the contrary, are never perfectly white when pure, but are a little inclined to straw colour. They should be hard and free of grease; when very white and opaque, they are adulterated with tallow. Pure spermaceti candles are readily distinguished by their transparency, and they are therefore seldom adulterated. Wax candles, on the contrary, are much adulterated; and it is not uncommon for dealers to quote their price at one-half of that of the raw material.

Tallow candles were formerly subject to an excise duty of 1d., and wax and spermaceti of 3½d. per lb. These duties were repealed from 1st January 1832 (1 & 2 Wm. IV. c. 19). In 1830, the quantities brought to charge were, tallow, 115,586,192 lbs.; wax and spermaceti, 1,265,113 lbs.; and the net produce of the duty, £482,413; a considerable quantity of tallow candles were, however, manufactured privately. The exportation of candles is trifling, except to the West Indies.

CANDY, a large East Indian weight, consisting generally of 20 maunds. The Madras candy of 20 maunds = 500 lbs. avoird.; the Bombay candy also of 20 maunds = 560 lbs., or 5 cwt. avoird., reckoned for grain at 25 Winchester, or 24¼ Imp. bushels.

CANDY, a preparation of sugar, made by melting and crystallizing it several times.

CANELLA ALBA, an aromatic tree common in the West Indies. The bark of the young branches, freed from its outer rind, is imported in rolls or quills two or three feet in length, or in small broken pieces, and employed as a stomachic. It has a bitterish, acrid, peppery, taste, and is sometimes called *white cinnamon*.

CANES are obtained from a variety of palms and plants of the reed kind. They are imported principally from the Malayan Archipelago, India, and China. The chief are the BAMBOO and RATTAN.

CANNA, OR CANNE, a measure for cloth in Italy, and in the South of France, Spain, and other places.

CANNON. [GUN.]

CANTARO, a weight used in Italy, Egypt, and the Levant. It generally contains 100 rottoli.

CANTEEN, a place in a fort or barracks licensed for the sale of liquors, tobacco, and provisions. The sale of liquors is not allowed except at the canteen, and the quantity sold at one time is regulated by the commanding-officer. The quartermaster is responsible that no disorder occurs.

CANTHARIDES, called also Spanish fly or blister beetle, is an insect (*Cantharis vesicatoria*) found in the warmer parts of Europe, especially Spain and Italy. It is about three-fourths of an inch long, of a bright green colour, except the legs and antennæ, which are bluish black, and is well known for its medical uses.

CANVASS, a coarse strong cloth made of hemp or flax, and used chiefly for SAIL-CLOTH.

CAOUTCHOUC, GUM-ELASTIC, OR INDIAN RUBBER (Fr. *Caoutchou.* Ger. *Federharz*. Por. *Boracha*. Sp. *Resina elastica*. *Ulé*), is obtained from the juice of several South American plants, particularly the *Siphonia elastica*, also from the *Ficus elastica*, a species of fig-tree. Incisions are made in the bark, chiefly in wet weather, and the flux, which is abundant and of a yellowish-white colour, is conducted by tubes into vessels for its reception. The caoutchouc is afterwards separated by heat or exposure to the air. It is formed by the natives of S. America into pear-shaped bottles, by being spread over moulds of clay, and its dusky coating is communicated by exposure to smoke in order that it may be thoroughly dried. It is then commonly marked on the outside with various lines or figures, and the clay after having been softened with water is picked out.

Caoutchouc, when pure, is destitute of taste and smell. Its sp. gr. varies from ·930 to 1. It is remarkable for its elasticity. It is insoluble in water and in alcohol; and is difficultly acted upon by acids and alkalis. It dissolves sparingly in washed ether; but in the coal naphtha, or oil obtained from gas works, it is softened and dissolved in a very remarkable manner, and the solutions have been applied to render various articles of clothing waterproof. The cloth thus prepared, besides being extensively used for cloaks, is so impervious to moisture and to air, that floating or hydrostatic beds for invalids are formed from it, and even beds and cushions are rendered elastic by inflation. Caoutchouc is besides employed for the erasure of pencil marks on paper by friction, for the manufacture of braces and surgical instruments, and it is cut by machinery into very fine thread, which is woven into a variety of ornaments and elastic fabrics. "Subjected to destructive distillation it yields a large relative proportion of a highly volatile and inflammable liquid hydrocarbon. This product, which is applicable to many useful purposes in the arts, is made upon a large scale by Messrs Enderby of London; it is a solvent of caoutchouc itself, and of other substances used as varnishes. The various applications of caoutchouc in the manufacture of elastic articles and other useful products, are as yet probably in their infancy only." (*Brande's Chemistry*.)

Caoutchouc is imported chiefly from Guiana, in the woods of which, as well as in the province of Quito, and along the borders of the Amazon, the tree grows abundantly. The consumption has of late years been greatly increased, partly owing to a considerable reduction of duty, but chiefly from the discovery of its application to waterproof clothing by Mr M'Intosh.

CAPE BRETON. [NOVA SCOTIA AND CAPE BRETON.]

CAPE DE VERDE ISLANDS, a group subject to Portugal, situated in the Atlantic, about 300 miles W. of Cape Verde in Africa, and consisting of ten islands, of which the largest are St Jago, St Antonio, and St Nicholas; the smaller Mayo, Bona Vista, Sal, St Vincent, St Lucia, Brava, and Fogo, besides numerous islets. Population in 1830, 88,000, out of which 30,000 are said to have died of famine in 1833. Chief town, Porto Praya, in St Jago; lat. 14° 54′ N. long. 23° 30′ W. It is the residence of a governor-general, whose administration extends over these islands and the Portuguese settlements in Senegambia.

The Cape de Verde Islands possess little commercial interest, being mountainous and unproductive, and situated at a distance from the usual track of vessels destined for America and the Indies. Their productions are cotton, fruit, cattle, poultry, orchilla, goats, asses, mules, turtle, and salt. The latter is formed in large quantities by natural evaporation on the seashore, particularly in Mayo and Sal, which are frequented by American vessels for its collection. The amount of British produce and manufactures exported to these islands in 1838 was £1392, but in 1839, only £189.

CAPE OF GOOD HOPE, a British colony composed of the portion of Africa lying between the Southern Ocean and lat. 29° S. Area about 150,000 sq. miles, but not accurately defined. Population (1838), 156,616, chiefly African-Dutch, negroes, and Hottentots. The administration of public affairs is vested in a governor, aided by executive and legislative councils.

The Cape territory is in general rugged and barren, and deficient in the means both of internal and external communication. But a portion of the E. coast is of a different character, more especially towards the N. E. frontier, including the district of Albany, where the country is well wooded and watered, and favourable for agriculture and grazing. The W. coast, and a great portion of the rest of the country, consist of barren mountains and arid plains, one of which, the Great Karroo Desert, a high parched table-land, separating the Cape Town District from the finer country to the N.E., extends about 100 leagues in length, from E. to W., and 30 in breadth. The climate, however, is one of the finest in the world; and were the aridity of the soil counteracted by irrigation, and the means of intercourse improved by the formation of roads, the character of the country would be very different, as the capabilities of the soil are naturally great. The only parts thickly settled are the Cape and Stellenbosch districts, which contain about 3-8ths of the whole population, some parts of Worcester, Graaf Reynet, and the British settlements at Graham Town and Bathurst, in Albany; the other portions are occupied chiefly by Dutch graziers called *boors*. Nearly 225,000 acres are under crop, yielding annually about 540,000 bushels of wheat, besides smaller quantities of barley, oats, and rye; the remainder of the productive surface is chiefly pasture land. The principal mercantile commodity is wine, of which about 12,000 leaguers (1,518,000 Imp. galls.) are made yearly, besides about 1000 leaguers (126,630 galls.) of brandy. The vine is grown chiefly in the Stellenbosch district, and within forty miles round Cape Town; but the wines, except that made at Constantia, near Table Mountain, are almost all of very low quality. Of late years, part of the capital which was embarked in the wine trade has been transferred to the production of wool, which has thus risen into considerable importance; and as the Merino breed of sheep has been introduced with success, wool will probably become erelong the chief staple of the colony. The fisheries might, under good management, be an important branch of industry, as the coasts are frequented by numerous whales; but at present the trade is almost entirely in the possession of the Americans.

The progress of the Cape colony has, of late years, been materially impeded by the invasion of the N.E. frontier by the Caffres, and by the extraordinary emigration of about 20,000 of the Dutch colonists to Natal, on the E. coast, partly on account of the great fertility of that district, and partly from hostility towards Government, on account of the emancipation of their slaves. The departure of the farmers has produced a great rise in the price of provisions at Cape Town, which has materially lessened the demand for ship refreshments, formerly a principal branch of trade at that port, and amounting to about £100,000 yearly. The chief of the other native exports are, wine (1,000,000 galls.), wool, hides and skins, horns, tallow, flour, wheat, bran, butter, whale oil and fins, aloes, ivory, besides which, coffee [COFFEE], sugar, tea, spices, and a variety of other articles are shipped at second-hand from Brazil, Mauritius, India, and China. In 1836, the exports amounted in value to £384,383; of which at Cape Town, £336,199; at Port Elizabeth, £47,307; at Simon's Town, £877. The imports into the colony in the same year amounted to £891,162, chiefly from the United Kingdom. With the exception of foreign spirits (principally brandy), wines, and spices, the British imports consist almost wholly of manufactured goods, and of these upwards of one-third are cottons; the remainder chiefly woollens, apparel, silks, arms, hardware, and earthenware. The demand for English produce and manufactures increased from £216,558 (the declared value) in 1827, to £623,323 in 1838, arising partly from the improved habits of the Dutch farmers, but principally from a more extended intercourse with the natives of the interior.

The *ports* are few and in bad condition. The principal are, Cape Town, the capital and seat of government, situated in 33° 56′ S. and 18° 28′ E. on Table Bay; pop. 20,000; Port Elizabeth, in Algoa Bay, the shipping place for the E. part of the colony; and Simon's Town, which are all free warehousing ports. In 1836, 486 ships entered these ports, having an aggregate tonnage of 134,875 tons.

MEASURES, WEIGHTS, MONEY, DUTIES, &c.

Measures and Weights.—132¾ Dutch ells = 100 yds.; 49¼ morgen = 100 acres. The leaguer of 4 ahms = 152 English wine or 126·63 Imp. galls.; the muid or mudde of 4 schepels = 3·06 Imp. bush.; and 91¾ Dutch lbs. = 100 lbs. avoird. The Dutch measures and weights, however, are now almost entirely superseded by British.

Money is reckoned in pounds, shillings, and pence sterling; or in rixdollars of 8 schellings, 24 dubbletjees, or 48 stivers = 1s. 6d. sterling. The currency principally consists of British coins and of notes issued by the Government Bank and the "Cape of Good Hope Bank."

Banks, &c.—A government bank has long existed at Cape Town, which receives deposits, discounts bills, and issues notes. Much injury was at one time sustained by the over issues of the bank, which were conducted to such an extent that the paper rixdollar was depreciated from 4s. to 1s. 4d., its value prior to 1826, when it was fixed permanently at 1s. 6d. The Cape of Good Hope Bank, lately established, has its head office also at Cape Town; but it has branches at Graham Town and other places. Another joint-stock bank has been projected at Graham Town; but it may be doubted how far the resources of that locality are yet sufficient to afford stability to such an institution. There are also two insurance companies, namely, the "South African" and "Cape of Good Hope." The shares of all these undertakings are now quoted at high premiums.

Finances.—In 1836, the public revenue amounted to £158,697, and the expenditure to £147,579; the last, however, was exclusive of the expenses incurred in England on account of the colony.

Import Duties.—The general rate on British or colonial merchandise is 3 per cent. *ad valorem*; on foreign, 10 per cent. (*Order in Council, August* 10, 1840). The dues levied on vessels entering Table or Simon's Bay, for the purposes of trade, are 4½d. per ton; but if for refreshments or other purposes, only 2½d. per ton. The importation of arms and ammunition is prohibited except with permission from the government.

The Cape was discovered in 1493. Formal occupation by the English, 1620. Dutch colonization, 1650. British conquest, 1795. Restoration to the Dutch, 1800. Recapture by the British, 1806; to whom the colony was finally ceded in 1815.

CAPERS (Fr. *Capres.* It. *Cappari*), the flower buds of the caper bush, (*Capparis spinosa*), a trailing shrub, which grows in profusion in Italy and the south of France, particularly between Marseilles and Toulon. They are used as a pickle, and about 70,000 lbs. are consumed in the United Kingdom yearly. The youngest and smallest are deemed the best.

CAPITAL consists of the accumulated savings of industry, capable of being employed either for the support of human existence, or as an instrument of production. It is distinguished by economists into two sorts, arising from a difference in the mode of applying it. *Fixed capital* consists of those articles of a durable nature which contribute to production without being destroyed. Such are roads, canals, houses, docks, harbours, warehouses, and those tools, machines, and other accommodations which do not perish in the using. *Circulating capital* possesses this distinctive character, that it is necessarily consumed in contributing to production, and that it must be reproduced in order to enable the producer to continue his operations. Of this nature are food, coal, seed, wool, clothes, some kinds of tools, and all other articles subservient to production which perish in the using. These terms are not however always very definite. Thus, the lower animals are in some cases to be regarded as fixed, in others as circulating capital; oxen used permanently for draught, belonging to the former, but when reared solely for the market, to the latter. "It follows, necessarily, if the instruments of labour, the materials on which it is employed, and the subsistence of the labourer, are all included under the name of capital, that the productive industry of every country is in proportion to its capital, increases when its capital increases, and declines when its capital declines. It is obvious that when there are more instruments of labour, more materials to work upon, and more pay for workmen, there will be more work, provided more workmen can be obtained. If they cannot, two things will happen: wages will be raised, which, giving an impulse to population, will increase the number of labourers; while the immediate scarcity of hands will whet the ingenuity of capitalists to supply the deficiency, by new inventions in machinery, and by distributing and dividing labour to greater advantage." (*Mill's Political Economy.*)

Capital, according to the sense in which the term is generally used in commerce, does not differ essentially from that now explained. It comprehends in addition the debts due to traders; but in estimating capital in the aggregate, these must evidently be neglected, as what constitutes an article on the credit side of the books of one class of men, forms an exactly equal item of debt in the books of others.

The ratio of the accumulation of capital depends upon the degree in which production annually exceeds consumption. Accumulation is facilitated by the abatement of taxes, and by the removal of monopolies, and of all impediments to the free employment of the capital, labour, and skill of a nation. It is also increased by whatever tends to economize consumption in the different branches of industry, and by the prevalence of frugal habits,—objects which only can be secured by basing professional skill of every sort upon real knowledge, by the enlightenment of the people, and above all by the predominance of pure and simple tastes and sound morals.

CAPSICUM. [PEPPER.]

CARAT, OR KARAT, a term used in a relative sense to express the fineness of gold. It means the twenty-fourth part of any given weight of that metal or of its alloy. If such a weight be pure gold, it is said to be 24 carats fine; if three-fourths only be gold, it is said to be 18 carats fine. The diamond carat, however, is a definite weight = 3$\frac{1}{6}$ troy grains; and the pearl carat = $\frac{4}{5}$ths of a troy grain.

The carat was originally the $\frac{1}{24}$th of the old marc, or half-pound of the French, from whom the term is said to have come.

CARAVAN, a troop or body of merchants or pilgrims, as they travel with camels in the east. The Koran, as is well known, enjoins every Mussulman, who has the means, to perform a pilgrimage to Mecca once at least in his life. Dulhajja, as the name imports, is the month in the Mohammedan calendar peculiarly set apart for the performance of this solemnity. Formerly when devotional zeal was more ardent, the difficulties of the journey through the desert were held to increase the merit of the act, but of late a considerable portion of the hajjis do not travel by land with the caravans, but arrive by sea at Jidda. The regular haj-caravans are six or seven in number, though they do not always make their appearance together, nor even perform the visit annually. One caravan proceeds from Syria, consisting chiefly of pilgrims from the Turkish empire. Another, issuing from Cairo in Egypt, conducts the Mogrebin, or African hajjis. A third caravan arrives from Bagdad with Persian pilgrims; and two smaller caravans go from Lahsa and Oman, besides a separate company of pilgrims from Yemen. The principal is that from Syria, which used to be accompanied by the caliph in person. During the whole route it is attended from town to town by the armed force of the district, and from Damascus to Medina it moves with great pomp across the desert,—a journey of 30 days. The Pasha of Damascus, or one of his principal officers, always escorts it; and the different classes of hajjis are stationed according to their town or district. At every stage (or distance of 11 or 12 hours' march), is a storehouse for provisions, with a small garrison, and a large tank at which the camels receive water. The usual time of travelling is from three o'clock in the afternoon to an hour or two after sunrise next day,—torches being lighted during the night. The pomp and magnificence of this moving solemnity are still considerable, though much diminished since the time of the caliphs, both in point of splendour and attendance. In 1814, the Syrian caravan, which was reckoned small, amounted only to 4000 or 5000 persons, attended by 15,000 camels. But of late years the numbers are understood to have increased, owing to the greater security afforded by the Pasha of Egypt against the Bedouins and Wahabees. Most of the pilgrims undertake the tour with a view to profit. Some accompany the caravan as soldiers; some are pilgrims by profession, and are paid to perform the sacred journey for others; and except mendicants, almost every hajji combines mercantile adventure with his religious duties. So much is this now the case that the annual assemblage of Mecca, instead of a religious ceremony, may be more properly regarded as the principal eastern fair for the exchange of the productions of Asia, Africa, and Europe. The Mogrebins bring their red bonnets and woollen cloaks; the western Turks, shoes and slippers, hardware, embroidered stuffs, sweetmeats, amber, European trinkets, and other small wares; the Anatolians bring carpets, silks, and Angora shawls; the Persians, Cashmere shawls, and large silk handkerchiefs; the Afghans, plain coarse shawls, beads, &c.; the Indians import the numerous productions of their rich and extensive regions; the people of Yemen bring sandals and various articles in leather; and of late years an increased quantity of European manufactures are carried there through various channels.

Besides the religious caravans, there are many others which travel betwixt various places both in Africa and Asia. Thus, the intercourse betwixt Egypt and Barbary and the interior of Africa is conducted by means of these associations; the trade between Russia and China is likewise a caravan trade; as is that between Aleppo and Bassora, and Bagdad; similar lines exist in the countries to the E. of the Caspian; and others on a smaller scale are constantly occurring at various places where travellers and others assemble and organize an expedition for their mutual safety; one of their number being elected to regulate the order of march, and others to adjust disputes.

"Notwithstanding the robberies and violence of legal and illegal bandits, the commerce of the east, without exchanges or post offices, canals or railroads, insurances or credit, unprotected by courts at home or consuls abroad, unprotected by a legislative body, where all interests are duly represented,—extends its gigantic operations from Mount Atlas to the Yellow Sea; from the Blue Mountains amid the deserts of Africa to the Baikal in the wastes of Tartary; and by the slow and noiseless step of the camel, maintains the communications, exchanges the produce, and supplies the wants of three-fourths of the globe. It is impossible to witness the arrival of the many-tongued caravan at its resting-place for the night, and see unladen and piled up together the bales from such distant places,—to glance over their very wrappers, and the strange marks and characters which they bear, without being amazed at so eloquent a contradiction of our preconceived notions of indiscriminate despotism and universal insecurity of the east. But while we observe the avidity with which our goods are sought, the preference now transferred from Indian to British muslins, from Golconda to Glasgow chintzes, from Damascus to Sheffield steel, from Cashmere shawls to English broad cloth; and while at the same time the energies of their commercial spirit are brought thus substantially before us, it is indeed impossible not to regret that a gulf of separation should have so long divided the east and the west, and equally impossible not to indulge in the hope and anticipation of a vastly extended traffic with the east, and of all the blessings which follow fast and welling in the wake of commerce." (*Urquhart's Turkey*, p. 134.)

CARAWAY, a biennial umbelliferous plant (*Carum carui*), cultivated in the southern districts of England, chiefly for its seeds, which are used to a considerable extent in confectionery, also for flavouring cheese, spirits, and liqueurs, and in medicine. The seeds have an aromatic smell, a warm pungent taste, and yield much essential oil. They are largely imported from Holland.

CARBUNCLE, a name sometimes given to the Precious Garnet, or Almandine.

CARDAMOMS, a spicy seed obtained from small plants growing in India, Ceylon, and Java. They are of two sorts, called the lesser and greater seeds.

Lesser Cardamom seeds are a product of the *Elettaria cardamomum*, which is produced in great abundance on the Malabar coast. They are small, almost black, nearly triangular, rugose, with an intensely aromatic taste, and a fragrant camphoraceous smell, and are contained in a triangular membranaceous capsule, pointed at both ends, about half an inch long, and trilocular. They are much used in medicine, and as a condiment. In India they are an article of great importance.

Greater Cardamom seeds, or the grains of paradise seeds, are a product of the *Amomum granum paradisi*, cultivated in Ceylon and Java. They are much larger than the preceding, more pungent, and less aromatic. They are sometimes imported into England, but are not esteemed.

Mr Milburn states that cardamoms are reckoned to keep best in a body; and are therefore packed in large chests well jointed, pitched at the seams, and otherwise properly secured, as the least damp greatly reduces their value. (*Oriental Commerce. Ainslie's Mat. Ind.*)

CARDS AND DICE. The manufacture and sale of these articles are regulated by 9 Geo. IV. c. 18; its chief clauses are as follow:—

§ 2. An annual license costing 5s. shall be taken out by every maker of cards or dice, under penalty of £100, and a duty of 1s. shall be paid for each pack of cards (to be specified on the ace of spades); and of 20s. for every pair of dice. § 7. Manufacture to be confined to cities of London, Dublin, and Cork, under penalty of £100. § 24. No playing cards shall be sold as waste cards, unless a corner of every such card shall be cut off at least half an inch in depth, nor unless the same shall be sold or exposed to sale in parcels, without being enclosed in any wrapper, or paper, or other cover. § 25. It shall be lawful for any person, not being a licensed maker of cards, to sell any pack, notwithstanding the same may have been previously sold and opened, or used, if every such pack shall be sold without the wrapper or jew of any licensed maker, and shall contain not more than 52 cards, including an ace of spades duly stamped for use within the United Kingdom, and shall be enclosed in a paper or wrapper with the words "second hand cards" printed or written in distinct and legible characters on the outside thereof. No foreign cards shall be warehoused without having the name of the maker thereon.—The stamp-duty on cards and dice annually amounts to about £14,000.

CARGA, a liquid measure in Barcelona, equal 27¼ Imp. galls.; also a Spanish weight. In Candia it is a corn measure, equal 4⅕ Imp. bushels.

CARMINE is a beautiful red pigment, made of cochineal and alumina, or oxide of tin.

CARNELIAN, an ornamental stone, so called because some kinds are of a flesh colour, is a variety of agate or calcedony. Carnelians, when recent, are dark olive green, inclining to greenish gray; but, by exposure to the sun and calcination, they become generally of a reddish colour, though sometimes yellow or white, the deep clear red being, however, the most valuable. They are never figured or striped. The great supply is from Japan, and they are also imported from Bombay, being collected in the province of Guzerat; but the best come from the Gulf of Cambay. Many of the antique gems are engraved in carnelian, and it is now much used for seals.

CARPETS (Fr. *Tapis*. Ger. *Teppiche*. It. *Tappeti*. Rus. *Kowrü*). The principal localities of the carpet manufacture are Kidderminster in Worcestershire, Wilton in Wiltshire, Axminster in Devonshire, Yorkshire, and Kilmarnock, Edinburgh, and Stirling, in Scotland. The term Kidderminster is applied not only to the carpets made in that place, but likewise to the Yorkshire and Scotch. Other kinds of British carpets are distinguished as "Brussels," "Venetian," and "Damask Venetian." The Brussels are in fact Wilton carpets; they are composed of linen and worsted, and comprise the most important branch of the manufacture. The more extended use of carpets of late years has led to so great an increase in this branch of manufacture, that it is said to have been quadrupled since the beginning of the present century. In a well written article on carpets in the Penny Cyclopædia the number of looms in Britain is estimated at 4000, and their yearly produce at £1,000,000. The exports are chiefly to the United States. A few carpets of most beautiful fabric are still imported from Turkey and Persia; but the oriental carpets are now nearly equalled by the best of those made in Axminster, Wilton, and Edinburgh. The Scoto-Persian and Scoto-Turkish carpets made in Edinburgh have of late years obtained high celebrity.

CARRIAGES. [COACH. PASSENGER.]

CARRIERS, LAW OF. Carriers inland come under that doctrine, derived from the civil law, which renders innkeepers, shipowners, &c. liable to restore the property committed to their charge in the condition in which they receive it, unless it has suffered from "an act of God or the king's enemies." The term includes all who carry persons or goods for hire, as mail-coach contractors, waggoners, stage-coachmen, and bargemen; but hackney coachmen are not understood to be included. The extent of responsibility, from the necessity of admitting many qualifications, was vague and irregular, until fixed by 11 Geo. IV. & 1 Wm. IV. c. 68. It was thereby provided that carriers should not be liable for the loss or injury of gold or silver (in coin or otherwise), jewellery, watches, clocks, trinkets, notes or other securities for payment of money, stamps, maps, writings, title-deeds, paintings, engravings, plated articles, glass, china, silk, furs, or lace, whether delivered for simple carriage, or accompanying a passenger, when the value exceeds £10, unless the value has been declared at the booking-office, or other proper place, and the usual increased charge paid for conveyance. The rate of increased charge must be published, by notice affixed in legible characters, on some conspicuous part of the office. When the increased rate is paid, the person in attendance must give a receipt (which is not liable to stamp duty) if required, otherwise he loses the benefit of the act, and becomes responsible at common law. Carriers are liable for the safety of goods not specified by the act, notwithstanding any advertisement to the contrary. Where the increased rate is paid with a parcel, the party entitled to recover damages, on its loss or injury, is also entitled to recover the increased charge. Carriers are not concluded against as to value by the additional rate being so paid, but may require proof from the party suing. [There are separate statutes affecting the liability of shipowners. SHIPPING.]

It is ruled that one who holds himself out as a carrier to all comers, cannot refuse goods offered for conveyance if he have room for them, unless he can show that they are of a nature calculated to injure other property. As a counterpart to the obligations which he thus comes under to the public, the carrier has a lien on the property conveyed by him for his charges. The lien is particular, not general, and so one set of goods cannot be detained for the charges on a previous set. (*Jones on the Liabilities and Rights of Common Carriers.*)

CARROT, an umbelliferous plant (*Daucus carota*), having a succulent root, which is largely used as human food, and in some places for the maintenance of stock, especially horses and dairy cows. The most esteemed for field culture in England are the Altringham, the Orange, and the Long-red. Professor Low states that, under favourable circumstances, the produce will be from 300 to 400 bushels to the acre, though much beyond this quantity is sometimes produced. Carrot seed is raised largely at Weathersfield, in Essex: it is also imported from Holland.

CARTHAMUS. [SAFFLOWER.]

CASCARILLA BARK. [CROTON.]

CASH, a general term for money; also the name of a small Chinese coin.

CASH-CREDITS *in the Banking System of Scotland.* "A cash-credit," says Professor Bell, "is an undertaking on the part of a bank to advance to an individual, or to a partnership, such sums of money as may from time to time be required, not exceeding on the whole a certain definite amount; to be repaid, and a continual circulation kept up by the replacing in the bank of small profits and sums as they come in. The security upon which the advances are made, is a bond with sureties, generally two in number, for the repayment, on demand, of the sums actually advanced, with interest upon each issue from the day on which it is made; interest at a lower rate being allowed by the banker for the sums paid into the bank" (*Commentaries*, I. 367, 368). The security in short enables one to transact business with the bank, as if the sum for which the sureties have become responsible were actually deposited in his own name. When the banker discounts bills to the holder of the account, he may either enter them to the debit in the account, or hold them as separate transactions, but by adopting the latter step he is not foreclosed from entering them afterwards on the account, and so making the sureties responsible. The bond thus covers every description of transaction on account of which the party may become responsible to the banker, whether it be by a single cheque drawn by the holder himself, or a bill discounted by him, for payment of which the banker may have looked at first to another party. A cash-credit may be secured on real property. By an old Act of Parliament (1696, c. 5) securities for future debt could not be made real upon landed property. By a part of the old sequestration act, still in force (54 Geo. III. c. 137, § 14), this rule was so far modified that proprietors of lands might pledge them, either directly for the security of a bank which grants a cash-credit, or by way of relief to the cautioners in a bond, provided that the principal and interest which may become due be limited to a certain definite sum to be specified in the security, not exceeding the amount of the principal sum, and 3 years' interest at 5 per cent. "The limitation," says Professor Bell, "is rather vaguely expressed in the act; but the meaning seems to be, that the sum to be secured shall not exceed in amount the principal sum which the person to be accommodated shall have the privilege of drawing, together with 3 years' interest of that sum" (*Com.* II. 241). Were the bond, in the case where the security given is personal, to place the sureties in the situation of simple cautioners, the security would be extinguished or would prescribe in seven years. [CAUTIONARY OBLIGATIONS.] The limitation, however, is avoided by the practice of binding the principal and his sureties as co-obligants, the former being only distinguished from the latter as the person whose drafts are to be honoured. By this means also, the obligation to follow out diligence or execution against the principal debtor, before the cautioners can be sued, is avoided. The bank will be bound to assign to the cautioners the bills and other obligations which they have entered on the account, but if the balance due exceed the sum secured by the bond, the banker will not be bound to give up papers on which advances have been made, unless they have been entered in the account as they were presented, so as to be looked upon as discounted on the credit of the guarantees. These last may terminate their responsibility by notice to the bank, and to the principal in the bond.

"Where one granted a guarantee for a person who had a cash-credit, saying, 'Mr G. D. has mentioned to me that he may have occasion to overdraw his account to the extent of £3000; and, if he should do so, I hereby become bound to repay the same to you, in the event of his failing to do it;'—this was held not to be merely a guarantee for one advance, but to be an addition to the cash-credit, covering like it the balance on a series of transactions. Where, of three co-obligants in a cash-credit, two granted a letter requesting that it might be continued, 'in terms and to the extent of the bond,' on the holder's decease, in favour of his son, they were held conjunctly liable, though in terms of the bond there was a third obligant to share the responsibility with them, and they alleged that they granted the letter only as a continuance of their liability under the bond. Under a cash-credit in the regular form, the bank may introduce discounts of bills and other charges against the principal party, which have not properly formed part of his cash-account. The transactions charged on, however, must be strictly legal and regular. It was found on appeal, that the bank could not pursue cautioners on drafts drawn beyond the statutory distance (which was then ten, but is now fifteen miles), or wrong dated, where the bank-agent was aware of these circumstances; and this though the drafts were entered in accounts doqueted by the principal. A cautioner in a cash-credit for all bills on which C. F.'s name might appear, was liable for bills discounted to C. F. & Co., a concern in which C. F. had no partner." (*Burton's Manual of the Law of Scotland*, 462, 463; authorities quoted.)

CASHEW-NUTS (Fr. *Noix d'Acajou*. Ger. *Akajunüsse*. Por. *Nozes d'Acaju*. Sp. *Nueces d'Acaju*) are kidney-shaped bodies attached to the fruit of a small tree (*Anacardium occidentale*) found in the West Indies and South America. The kernel is a wholesome article of food, and is used as an ingredient in puddings. It is also sometimes roasted for the purpose of communicating a flavour to Madeira wine. The cashew fruit is highly esteemed in Brazil.

CASHMERE. [SHAWL.]

CASK (Fr. *Baril, Tonneau*. Ger. *Fass*. Por. *Barril*). Empty packages of British manufacture exported with merchandise and returned, are to be admitted to entry duty free (*C. O. 5th May* 1835). And packages from which wine or spirits have been racked, drawn off, or destroyed, are to be delivered free of duty. (*C. O. 20th October* 1835.)

CASSAVA, OR MANDIOC (Por. *Mandioca*), a farinaceous substance obtained from the roots of a plant (*Jatropha manihot*), which is extensively cultivated in South America, especially Brazil, where it forms the principal article of food. Tapioca is a well-known preparation of cassava.

CASSENETTE, a fabric made of very fine wool, sometimes tastefully mixed with silk or cotton. It differs from valentia and toilinette in having its twill thrown diagonally. Cassenette is much used for waistcoatings.

CASSIA FISTULA (Fr. *Casse fistulense.* Ger. *Purgircassie.* Pers. *Khyar chember*), a small tree indigenous to India, Ceylon, and Egypt, and cultivated in Jamaica. The fruit is a brownish-coloured pod, a foot or more in length, but scarcely an inch broad. The pulp of this pod has aperient properties, but it is now little employed. Two sorts of them are imported,—East Indian and West Indian. The former are the smallest and smoothest, and are generally preferred. (*Duncan's Dispensatory.*)

CASSIA LIGNEA (Fr. *Casse en bois.* It. *Cassiglina.* Sp. *Cassia lenosa.* Por. *Cassia lenhosa.* Ger. *Kassienrinde.* Du. *Moederoaneel Houtkassie*), a bark resembling cinnamon, procured, according to some, from the *Cinnamomum Zeylanicum*, or Ceylon cinnamon-tree, though on better grounds ascribed by others to the *C. Cassia* (Blume), indigenous to the forests of Quang-tung and Quang-see in China, but cultivated in the Eastern Islands. The cassia consumed in Europe is chiefly imported from Canton. It resembles cinnamon, but generally may be distinguished by being thicker and less quilled. It has also a fainter odour, breaks shorter, and is more acridly pungent to the taste. Mr Milburn recommends that "it should be chosen in thin pieces, of an agreeable, biting, and aromatic taste, and the best is that which approaches nearest to cinnamon in flavour; that which is small and broken should be rejected" (*Oriental Commerce*). This bark is chiefly employed as a substitute for cinnamon. In 1834, the exports from Canton by the British amounted to 2,347,600 lbs.; and by the Americans to 1,468,933 lbs.; the price in Canton being about 3d. per lb. The importations into the United Kingdom were, in 1833, 1,297,710 lbs.; in 1834, 2,066,836 lbs.; in 1835, 1,966,303 lbs.; in 1836, 837,413 lbs.; in 1837, 984,674 lbs.; in 1838, 369,598 lbs.; in 1839, 430,511 lbs. The quantity entered annually for home consumption is about 100,000 lbs.; the surplus is re-exported to all parts of Europe, except Portugal; also to Canada, West Indies, and Brazil.

Cassia Buds (Du. *Kassielblamen.* Por. *Flores de Cassia*), are produced by the same plant as the cassia bark, and are imported from China. They are of a dark brown colour, with a form like that of a nail. The flavour and taste resemble those of cinnamon.

Cassia Oil is of a fainter colour than cinnamon oil: taste acrid and pungent, and odour agreeable.

CASSIS, a kind of black currant (*Ribes nigrum*) formerly celebrated for its medicinal properties, but now only used in preparing the liqueur called *ratafia.*

CASTOR (Fr. *Castoreum.* Ger. *Bibergiel.* Rus. *Boboowaja struga*), a concrete medicinal substance of a peculiar nature, found in two pear-shaped bags situated beside two smaller follicles, in the inguinal region of both sexes of the beaver. It is of a penetrating unpleasant odour, and a bitterish and somewhat acrid taste. There are two kinds, the Russian, and Canadian or English, of which the former, now very rare, is the most esteemed. The Russian castor occurs in pairs of bags of unequal size, from 3 to 4 inches long, and 1½ to 2 inches broad at the base. The bags of American castor are smaller, narrower at the base, and much corrugated. That which is very old, quite black, and almost destitute of taste and smell, should be avoided. It should be kept in a cool place, and in a well-corked bottle.

CASTOR NUTS. [Castor Oil.]

CASTOR OIL (Fr. *Huile du ricin.* Ger. *Rizinus korner.* It. *Olio di ricino*) is prepared from the seeds of the *Ricinus communis* or *Palma Christi*, a plant which grows in the East and West Indies, America, and the S. of Europe. The oil is obtained from the seeds either by expression without any assistance from heat, or by boiling. The first, called *cold-drawn* castor-oil, is always to be preferred. It is of an amber colour, and of a slightly nauseous smell and taste. The oil obtained by boiling the seeds is more deeply coloured, more acrid, and more liable to become rancid. Castor oil is one of the most valuable aperients we possess, and the consumption has greatly increased since the late reduction of the duty to 1s. 3d. per cwt. It is chiefly imported from India, but smaller quantities are also brought from North America and the West Indies; that from Jamaica being of a superior quality. The *castor nuts* or seeds are now likewise imported in considerable quantities, and the oil manufactured in this country. The nut or capsule is trilocular, nearly the size of a large marble, of a pale green colour, and usually contains three whitish seeds of an oblong flat shape, and heavy taste. (*Ainslie's Mat. Indica.*)

CATECHU (Fr. *Cachou.* Ger. *Katchu.* Can. & Hind. *Cutt.* It. *Catecù*, *Catoia, Catto*), formerly called *Terra Japonica*, is an astringent extract, chiefly prepared from a decoction of the brown heart-wood of the *Acacia catechu*, a tree indigenous to Hindostan. It is a dry, opaque, friable substance, of various forms, rounded masses, or cut into discs, squares, or lozenges. Its taste is powerfully astringent, afterwards bitterish, then sweet, and its colour varies from pale brown to chocolate brown, the darker coloured being the most astringent. It is soluble in water, but more easily in alcohol. It seems to keep for any length of time without change. Catechu contains a greater proportion of tannin than any other substance known, 1 lb. being in this respect equal to about 7 or 8 lbs. of oak bark. Two sorts are chiefly imported, namely, an inferior kind from Bengal, and another of a yellowish-brown colour from Bombay. There is but little difference betwixt the two varieties; but according to the analysis of Davy, the Bombay catechu affords the greater proportion of tannin, and is therefore preferable. It is consumed in enormous quantities as a masticatory by the Malays and other betel-eating nations. In this country it was used solely as an astringent medicine, until of late, when it has been employed for tanning.

CATLING, OR CATGUT (Fr. *Corde à boyau*. Ger. *Darmsaite*. It. *Corde di budella*), cord made of the twisted intestines of the sheep. There are different kinds, as whip-cord, hatters' cords, cords for bowstrings, clockmakers' cord, and fiddle and harp strings; these last, made of the peritoneal covering of the intestines, are chiefly imported from Italy, where they are manufactured of a quality superior to those prepared in this country.

CAT'S-EYE, a gem which presents a beautiful opalescence like the light of the eye of a cat. It is a variety of fibrous quartz, interspersed with thin filaments of asbestos. It is often brown and red, but commonly of a grayish or greenish colour, and generally translucent. This stone, which is chiefly procured in Ceylon and Malabar, is held in high estimation. Among the late King of Candy's jewels, sold by auction in London in 1820, there was a cat's-eye, which measured two inches in diameter, and brought upwards of £400.

CAT-SKIN. [FUR.]

CATTLE (NEAT), OR OXEN. The domestic ox (*Bos taurus*), said to be of Asiatic origin, is found from the equator almost to the limits of vegetable life. From an early period, Britain has owed no small part of her opulence to the excellence and numbers of cattle possessed by her. The varieties or *breeds* are greatly diversified both by natural circumstances and by the effects of art in changing their properties and form. According to Professor Low, the *types* of the cattle of this country are as follow:—1. *The mountain breeds*, comprehending those small hardy animals which are naturalized and reared in the more elevated parts of Scotland, Ireland, and Wales. 2. *The Devon breed*, a medium-sized breed, generally of a bright red colour, peculiar to the S. of England, and of which the parent stock is the North Devon. 3. *The long horned* (suited to field grazing and rougher treatment), prevailing chiefly in the humid and western parts of England and the lower districts of Ireland, and of which the most improved variety is the Dishley. 4. *The short horned* (suited to stall feeding, and the practice of the most improved agriculture), more peculiarly belonging to the dry and eastern parts of the country, and of which the most improved variety is the Teeswater, called also the Dutch or Holstein. 5. *The Alderney*, a small delicate breed found almost exclusively in the islands of the British Channel. The breed of short horns is the most esteemed; it is indeed said, that it has in form, disposition to fatten, and early maturity, been brought to all the perfection of which the ox seems to be susceptible (*Low's Agriculture*). Mr Youatt states that this country "has to boast of more than eight millions of cattle unrivalled in the world. 160,000 head of cattle are annually sold in Smithfield alone, without including calves or the *dead market*—the carcasses sent up from various parts of the country. If we reckon this to be a tenth part of the cattle slaughtered in the United Kingdom, it follows that 1,600,000 of them are sent to the butcher every year; and averaging the life of the ox or the cow at five years, the value of British cattle, estimated at £10 per head, will be £80,000,000." (*Youatt on Cattle.*)

Little can be said regarding the commerce in cattle, from its scarcely coming within the range of the public accounts. It consists in a great measure in bringing the mountain-bred animals to fairs and public markets, where they are purchased by the lowland farmers, and afterwards fattened for the supply of the towns. The best are those produced in Argyllshire and in the Hebrides. The different islands contain about 150,000 of these cattle, of which it is calculated that not less than one-fifth are sent annually to the mainland. If these average £5 a-head, the amount will be £150,000. The cattle bred in the West Highlands are, at the age of 2 or 2½ years, removed into Dumbartonshire and the neighbouring counties. At 3 years old, they, along with large quantities from Galloway, are carried to the northern counties of England, and so by degrees southward, particularly to Norfolk and Suffolk, from whence the London market is chiefly supplied. Of late years, however, a considerable change has taken place in this course of trade, owing to the facilities afforded by steam-navigation; and large numbers are now fattened in the eastern and northern counties of Scotland, and forwarded to London direct from Leith, Dundee, Aberdeen, and other ports, and from the western ports to Liverpool. Of Irish cattle, about 100,000 are annually imported into the Mersey. Large quantities are likewise carried into the Bristol Channel, and fattened in the adjoining counties, particularly Somersetshire.

The characters which indicate a disposition to feed, in the ox, are described by Professor Low to be—the fineness of the bones,—the largeness of the body, as compared with the limbs, neck, and head,—the broadness of the chest,—the roundness of the body,—and the soft and elastic touch. The last is a property with which all graziers are familiar. They call it a mellow feel, the meaning of which it is more easy to conceive than define. The form of animals that are best fitted to secrete and yield milk is somewhat different. "A dairy cow, like a feeding animal, should have a skin soft and mellow to the touch,—should have the back straight, the loins broad, the extremities small and delicate; but she should not, as in the case of the feeding animal, have the chest broad and prominent before. She should rather have the fore-quarters light, and the hind-quarters relatively broad, capacious, and deep; and she should have a large udder." (Pp. 505, 533.)

"The parts of an ox to which the term *offal* is usually applied, are the head and feet, the tallow, the hide and horns, and the entrails." "The tallow is generally considered to be of the same value, weight for weight, as the flesh of the four quarters; and so likewise is the hide. These and the other parts termed offal are commonly regarded as forming about one-fifth of the value of the animal. When beef is said to be sold at a certain price, *sinking the offals*, the meaning merely is, that the whole price of the animal is reckoned upon the carcass alone; hence, when beef is sold at a certain price, sinking the offals, that price is more than if it were sold without including in it the price of the offals. That portion of the ox which is used for food, exclusive of the offals, is usually termed the quarters, because the animal, on being cut up, is divided into four parts or quarters. The most esteemed parts for food are the hind-quarters. These weigh somewhat less than the fore-quarters; though the more perfect the form of the animal is, the more nearly do the fore and hind quarters approach in weight. Practice enables persons to judge of the weight of animals by the eye alone; but it is convenient to be able to ascertain the weight by measurement. This may be done with considerable correctness in the following manner:—When the animal is standing in a natural position, measure his length in feet from the foremost upper corner of the shoulder-blade, in a straight line to the hindmost point of the rump; then measure the girth or circumference immediately behind the fore-legs; multiply the square of the girth by the length, and this product by ·238, which will give the weight of the quarters in stones of 14 lbs. each." "Another method of ascertaining the weight of fat cattle is by weighing them when alive, and multiplying the gross weight by ·605" (*Low*, p. 519). The present average dead-weight of bullocks is estimated by Mr Youatt at 656 lbs., and of calves, 144 lbs.

By 31 Geo. II. c. 40, no salesman, broker, or factor employed in buying cattle for others, shall buy for himself in London, or within the bills of mortality, on penalty of double the value of the animals bought and sold; and drovers in London, and within 5 miles round, must be licensed, and wear a badge, according to regulations made by the mayor in 1831, pursuant to 21 Geo. III. c. 67. Cruelty is repressed by 3 Geo. IV. c. 71, and other acts; and the felonious killing or maiming of cattle by 7 & 8 Geo. IV. c. 30.

The importation of cattle is prohibited by 2 & 3 Wm. IV. c. 52, § 58.

Buffalo Cattle (*Bos bubalus*) are plentiful in Italy, North America, and eastern countries; also (*B. Caffer*) in the Cape Colony; but they are not reared in this kingdom. The buffalo is well-suited for heavy draught, and the milk of the female is good; but the flesh is held in less esteem than that of the ox.

CATTY, the Chinese pound, equal to 1⅓ lb. avoirdupois.

CAUTIONARY OBLIGATION, in the law of Scotland, is a term applied to a species of bond, which serves the part either of a mercantile guarantee, or of an English bond of security under seal covenanting in a penalty if a party do not perform certain stipulations. In its former capacity, the nature of the contract will be discussed under the head of Guarantee, and its application to one important branch of commercial law has been considered under the head of Cash-Credits. It will be sufficient on this occasion to give a view of the legal privileges which make the adoption of this form of security desirable. The Scottish courts not being restricted, like those of common law in England, to the awarding of money for breach of agreement, a bond of cautionary, instead of stipulating for a sum of money being paid, and releasing the surety if certain specifications are duly performed by the principal, first enumerates the obligations to be performed, and then binds the cautioner to see them done, or to pay a sum of money. It is a privilege of the cautioner that means shall have been taken to exact performance from the principal before he can be had recourse to; but to obviate inconvenience arising from this practice, it is not unusual for the cautioner to be bound as a principal along with the primary debtor. When there is more than one cautioner, each is liable for the whole, but he may exact payment of their respective shares from his co-cautioners. When a cautionary obligation is for the payment of money, it prescribes or becomes extinct, on the lapse of seven years. Where, however, by the terms of the bond the cautioner is taken liable as a principal, the prescription does not run in his favour, unless the bond contain a clause binding the original debtor to relieve him, or there be a separate document to that effect intimated to the creditor. One of the principal inducements for adopting this form in money transactions is, that the bond may contain a clause of registration [REGISTRATION, CLAUSE OF] on which execution may proceed without the intervention of a court. (*Burton's Manual of the Law of Scotland*, 451-467.)

CAVIAR (Fr. *Caviar.* It. *Caviario.* Ger. *Kaviar.* Rus. *Ikra*), a substance prepared in Russia from the roe of the sturgeon and other large fish. The roe is first freed of its membranes and washed in vinegar or white wine. It is afterwards dried in the air, salted, and the liquor being removed by compression in a bag, it is finally packed in kegs. When good, it is dry and of a brown colour, and is generally eaten with oil and lemon juice. Caviar is highly esteemed in Russia, and the consumption is very great. The best is made on the shores of the Caspian. A considerable quantity is exported from the ports of the Black Sea to Italy, but only a small portion is brought to this country.

CEDAR, a name applied to several distinct kinds of forest trees. The cedar of Lebanon is a valuable species of pine (*Pinus cedrus*), cultivated in gardens and parks in this country on account of its majestic appearance, but seldom for economical purposes, as it is slow of growth, and requires a free space for circulation of air. The wood has a fragrant odour, and is so bitter that no insect will touch it,—a circumstance which accounts for its great durability. The cedar of Lebanon was, in ancient times, much employed in religious buildings, and most readers are familiar with the descriptions given of it for this purpose in Scripture. The tree is still to be found thinly scattered in the elevated valleys of Lebanon, Taurus, and other mountain-chains in Asia Minor. A second species (*P. deodara*) exists in the Himalayan mountains, where it is regarded by the natives with great veneration.

The other kinds of cedar do not belong to the pine family. The white cedar of America (*Cupressus thyoides*) is employed for hoops, small boats, and roofing, but is not of great value. The Barbadoes cedar (*Juniperus Barbadensis*) is a large tree used for shipbuilding. The red cedar (*Juniperus Virginiana*) of North America and the West Indies is of great size and valuable. The wood is close, dark red, and odoriferous, and is much employed for cabinet work, wainscoting, and in the manufacture of pencils.

Cedar is imported in considerable quantities from Jamaica, the Bermudas, Bahamas, Carolina, Cuba, and New South Wales.

CELERY (*Apium graveolens*), a sweet and wholesome vegetable, of which there are several varieties. The blanched footstalks of the leaves are used as an esculent. The red variety is coarse but hardy, and well adapted for stews and soups. *Celeriac* is a turnip-rooted variety, occasionally imported from Hamburg.

CEMENT is a substance used for joining or covering bodies, in order to keep them from being acted on by fire or some other agent. Its nature differs of course according to the purpose for which it is employed.

CENTNER, a name applied to the hundredweight or quintal in Germany and Holland.

CENTRAL AMERICA, formerly the Spanish captain-generalship of Guatimala, is a republic, situated on the isthmus which connects N. and S. America, betwixt 8° and 18° N. lat., and 82° and 94° W. long. It is bounded N. by Mexico, E. and N.E. by the Atlantic, S.E. by New Granada, and S. and S.W. by the Pacific. Area, 150,000 sq. miles. Population, whites (Spanish Creoles), 475,000; Indians, 685,000; ladinos or mulattoes, 740,000; total 1,900,000. The republic is a confederacy of five states, Guatimala, Salvador, Honduras, Nicaragua, Costa-Rica, and a federal district. Capital, New Guatimala; pop. 50,000. The legislative power is vested in a federal congress, composed of deputies elected in the proportion of one to every 30,000 inhabitants, and half the members are re-elected annually. The senate, consisting of two members from each state, has the sanction of the laws, and acts as a council to the president, but is not considered as a house of congress. The executive power is vested in a president and vice-president. The elections are made through the medium of electoral colleges as in France.

Central America is traversed by the Andes, and the difference in the elevation of its surface is perhaps greater than in any other country of equal extent,—a circumstance which produces a corresponding difference in its climate and productions. Its vegetable products include not only those of tropical countries, but nearly all those of Europe, besides others peculiar to itself. It also possesses mines of the precious metals, which, though but little encouraged under the Spanish dominion, are said to be increasing in their products. Gold is found in Costa-Rica, and silver in Honduras. The great staples of the federation, however, are indigo, cochineal, sarsaparilla, hides, mahogany, cedar, dye-woods, sugar, rapadura or panela, a species of brown sugar principally used for the distilling of spirits, cotton, vanilla, and Peruvian balsam. The indigo is chiefly grown in the state of Salvador, along the Pacific; it is of excellent quality, and formerly about 1,000,000 lbs. were exported; but the civil wars having reduced its cultivation, a late account estimates the crops at from 500,000 to 750,000 lbs. The Nopal trees, on which the cochineal insect subsists, grow in the plains near the city of Guatimala, where the quantity collected in favourable seasons has amounted from 200,000 to 250,000 lbs. The cotton grown along the Pacific is of excellent quality; it is, however, always exported in an indifferent state, from not being properly freed from the seed. Good tobacco is grown in the hilly districts; but it is the subject of a government monopoly, and its cultivation being limited to certain places and to a certain amount, little is exported. Besides these articles, brimstone is collected from certain volcanoes, and salt is made on the north-western coast. Other parts of the republic are said to afford mother-of-pearl and tortoise-shell. Manufactures of coarse cotton and woollen goods, hats, crockery, furniture, and other common articles, are carried on to some extent, chiefly in Guatimala.

Central America is placed in a favourable position for commerce. The exports chiefly consist of specie, indigo, cochineal, and brazil-wood, with other articles in small quantities; the whole amounting annually to about $4,000,000.

The imports from Britain are cotton and woollen fabrics, hardware, and other dry goods. Silks, wines, spirits, and trinkets are brought chiefly from France and Spain; and Chinese productions are brought in American vessels to Acajutla.

The ports on the Pacific are La Independencia, Acajutla, La Libertad, Conchagua, Realejo, and San Juan del Sur; the bay of Conchagua also forms a safe and commodious harbour. The ports on the Atlantic are Isabel, Omoa, Truxillo, San Juan, and Cartago. Isabel, situated on Golfo Dolce, is a safe and good harbour. The government has several times contemplated the project of uniting the Pacific with the Atlantic by rendering the river San Juan on the eastern side navigable into the lake of Nicaragua, requiring a lockage of 200 feet in about 17 miles, and cutting a canal from the lake into the Pacific, a distance of barely 20 miles.

Measures and Weights, same as SPAIN.

Money.—Accounts are stated in pesos or current dollars each of 8 reals. The Central American hard dollar is of equal weight and standard with the Spanish. [MEXICO.]

Finances.—The revenues are derived chiefly from the customs duties and the tobacco monopoly; their present amount is not known. The public debt consists of a domestic debt of $3,500,000, and a debt of £167,000, contracted in England in 1825. The latter was negotiated at 73 per cent.; and interest was to be paid at 6 per cent.; but none has been received since Feb. 1, 1828.

Duties.—These were stated in 1836 to be 2 per cent. on the produce of the soil exported; and 14 per cent. on cotton goods, and 10 per cent. on most other articles imported.

CERTIFICATE. [CUSTOMS.]

CERTIFICATE, in the bankrupt law of England and Ireland, is a testimonial on the part of a certain proportion of the creditors that the bankrupt has surrendered and conformed himself to the acts. It is the authority for discharging the bankrupt. As to the rules for granting the certificate, and its special effects, see BANKRUPTCY.

CERUSE, OR WHITE LEAD, is a carbonate of lead, usually made by suspending thin plates of lead over heated vinegar, the vapour of which corrodes the metal, and converts it into a heavy white powder. The process is most destructive to the health of the manufacturer. White lead mixed with oil is a common paint. In medicine it is employed as a dressing for sores; and, notwithstanding its deleterious qualities, has been used as a cosmetic.

CESSIO BONORUM, in Scotland, is the process by which the effects of an insolvent debtor, who does not come under the system of sequestration applicable to traders, is divided among his creditors. This system, which may be traced to the civil law as practised throughout Europe, has long existed in Scotland, and its practice there seems to have been the model on which the earlier English insolvency acts were framed. [INSOLVENCY.] By the law as it stood till lately, the debtor applying for the benefit of cessio must have been a month in jail, but by the late act, any debtor imprisoned or against whom a writ of imprisonment for a civil debt is available, may apply. The process formerly could only be pursued before the Inner House of the Court of Session; but it may now proceed either before the Sheriff of the county, or before the Outer House of the Court of Session, subject, in certain circumstances, to a reference to the Inner House. There are provisions for the production and examination of the debtor and his books and other vouchers. The debtor will be liberated or protected from imprisonment during the process, unless the court see reason to the contrary. A list of the creditors with their debts must be inserted in the petition, and they must receive notice either by post-paid letters, or judicial writs, to appear at the examination. When decree of cessio is granted, it has the effect of conveying the debtor's whole property to a trustee for distribution among his creditors. In the case of his holding an annuity or office, an equitable deduction is made from his income. By the decree of cessio, execution of all existing writs against the debtor is barred, but in the event of any pecuniary improvement in his condition, he is still responsible for his debts. The process of cessio is a privilege to the debtor,—the creditors cannot force him to submit to it. (1 & 2 Vict. c. 110. *Burton's Manual*, 594-600.)

CEYLON, a magnificent island belonging to Great Britain, lying near the S. point of India, from which it is separated by the Gulf of Manaar. Extreme length from N. to S. 270 miles; average breadth, 100 miles. Area, 24,664 square miles. Population (1835) 1,231,000, of which 9000 were whites; the remainder chiefly Singalese, Malabar Hindoos, Moors, and Vedahs. The island is divided into five provinces, each subdivided into districts. The chief town, and seat of government, is Colombo, pop. 31,549. The administration is vested in a governor, assisted by executive and legislative councils.

Ceylon is an island of the highest natural capabilities,—having great varieties of soil, climate, and situation,—vegetable and other indigenous productions in excellent quality,—and considerable facilities of internal and foreign communication. In 1836, about 1,676,000 acres of land were cultivated or in pasture, and 2,818,000 acres waste; of the former, 464,580 acres were sown with paddy, 106,460 acres with fine grains, and 1,070,480 acres in pasture. Of its mineral wealth little is known; iron and plumbago are abundant; and, according to some authors, gold, silver, and mercury are found in the hill streams. Nitre and nitrate of lime have been obtained; also alum and sulphate of magnesia. Salt is found in natural deposits, is also formed artificially in several parts, and yields a revenue of about £30,000. In the deposits or "leways" of Hambantotte, it crystallizes spontaneously, and of the finest quality, in quantities which might be sufficient for the supply of the greater part of the Malay islands. Ceylon is also rich in precious stones; the gems most esteemed are the ruby and cat's-eye, but there are likewise found the amethyst, topaz, garnet, cinnamon stone, sapphire, and diamond; and the pearl and chank fisheries in the Gulf of Manaar are among the most celebrated in the world. [PEARL.] The chief commercial production, however, is cinnamon, grown in the S. E. portion of the island, and of which article it has almost a monopoly [CINNAMON]; but the cocoa-nut is perhaps the most valuable product of the island. Mr Martin states, that from Colombo to Tangalle, a distance of 100 miles, plantations of cinnamon, amidst groves of cocoa-nut trees, skirt the whole coast for ten miles from the seashore. Besides these articles, rice, cotton, tobacco, coffee, sugar-cane, pepper, cardamoms, and areca-nuts, are raised in various places, chiefly in the southern and central districts; while a great part of the interior, especially in the northern division, is covered with dense forests, in which teak abounds, and where also calamander, ebony, satin, rose, sappan, iron, jack, and other cabinet and fancy woods, are found in rich profusion. The most valuable animal in Ceylon is the elephant, which is of enormous size, and has been found in flocks of from 100 to 200; they are used for a variety of purposes; the ivory obtained from them, however, is not very considerable. The manufactures are nearly confined to arrack, salt, coir, cordage, oil, coarse cloths, and the smelting of a small quantity of iron in the interior.

The commerce is not very extensive, but it has increased during the last few years, since the abandonment of the Dutch monopoly system,—an improvement which was effected under the auspices of the late governor, Sir R. W. Horton. The exports to Britain chiefly consist of cinnamon, coffee, and cocoa-nut oil; besides which, there are sent plumbago, cordage, cardamoms, pepper, horns, tortoise-shell (chiefly from the Maldives), ebony and satin wood; and the imports principally of British manufactures. The exports to India and the British colonies consist of areca-nuts, arrack, tobacco, chiefly sent to Travancore, coffee, salt, cocoa-nuts, timber, hookah shells, coir, nipera lath, bêche de mer, sharks' fins, and fish-oil; and the imports, of rice (brought in large quantities from India), cloth, sugar, opium and other drugs. In 1835, the estimated value of the exports to Great Britain was £79,596; to British colonies, £63,632; to the United States, £400; to foreign states, £15,272; total (exclusive of the produce of the pearl-fishery, estimated at £40,000), £158,900; the principal articles being coffee, £59,046; cinnamon, £21,809; cocoa-nut oil, £12,100; cocoa-nuts, £6784; areca-nuts, £10,497; and arrack, £7217. In the same year, the amount of imports from Great Britain was £69,997; from British colonies, £251,894; from United States, £103; from foreign states, £30,082; total, £352,076; the principal articles being cloth, £116,259; rice, £115,605; paddy, £23,937; and wheat, £7202. In 1836, the amount of exports had increased to £308,703, including £228,501 to Great Britain; the imports to £411,167, including £93,257 from Great Britain.

The chief ports are Colombo, Trincomalé, and Point-de-Galle.

Colombo, in lat. 6° 57′ N., long. 80° E., where nearly the whole maritime trade of the island is carried on, is a handsome town defended by a strong fort mounting 300 cannon. It has a wooden quay adapted for vessels not exceeding 100 tons; larger vessels anchor in the small semicircular bay within which the quay is built, or in an outer roadstead, which, however, is safe only during the N. E. monsoon from November to the end of March. The climate is salubrious. The mean daily variation of temperature is from 76° to 86½° Fahr.

Trincomalé, in lat. 8° 32′ N., long. 81° 17′ E., 150 miles N. E. from Colombo, is also strongly fortified; and the harbour, described by Nelson as the finest in the world, is accessible at all seasons, the depth of water being so great that vessels may lie alongside the rocks in perfect safety.

Point-de-Galle, in lat. 6° 1′ N., long. 80° 10′ E., distant 76 miles S. S. E. from Colombo, is another excellent and strongly fortified harbour.

Measures and Weights.—The chief native measures are the amomam of 8 parrahs or 192 seers = 5⅓ Winchester bushels; the last = 6⅔ Winchester quarters. The leaguer of 75 welts or 300 canadee = 150 English wine gallons. The British measures of length and surface are used. The Candyan land-measure is the amomam of 4 peylas or 40 coornies = 2 acres 2 roods 37½ perches.

British weights are used for foreign commodities. The candy or babar = 500 lbs., and the garce = 82 cwt. 2 qrs. 16½ lbs. avoirdupois.

Money.—Accounts are now generally stated in pounds, shillings, and pence sterling. Formerly they were kept in rixdollars of 12 fanams, 48 pice, or 144 chalies = 1s. 6d. sterling. The circulating medium is composed of notes for £1 and upwards, issued by the colonial treasury, and payable in specie on demand; also of rixdollars, British silver and copper coins, Spanish dollars, rupees, copper fanams, and cowries or little shells which are used in small payments by the natives.

The Public Revenue of Ceylon, in 1835, amounted to £371,695, and the expenditure to £323,277; but this last was exclusive of an expenditure of about £130,000, incurred in Britain on account of the island.

Ceylon is said to have been the chief mart for eastern commerce in the sixth century. In 1505, it was first visited by the Portuguese, who in 1518 subdued the maritime provinces. In 1656, the Portuguese were expelled by the Dutch, from whom again the island was wrested by the British in 1796. Until 1815, the English occupied only the maritime provinces, while the King of Candy possessed the interior; but in that year the monarch was deposed, and the whole island has been since under the sway of this country.

CHAIN, a British land-measure divided into 100 parts called links. The English or Imperial chain = 66 feet, and 10 square chains = 1 Imp. acre. The Scottish chain formerly in use contained 74·12 feet.

CHAIN-RULE, OR RULE OF EQUATIONS, an arithmetical formula of German origin, which is of great practical utility, particularly in exchange calculations. It is so called from the terms being stated as equations, and connected as it were by a chain, so as to obtain by one operation the same result as by any number of different questions in the rule of three. The principle may be familiarly illustrated as follows:—

Required the number of Roman pauls which may be had for £60 sterling, reckoning £1 = 25 French francs, and 100 francs = 200 pauls.

This case contains obviously two different questions:—

1. If 25 francs be equivalent to £1, how many francs may be had for £60?

$$\begin{array}{l} 1 : 60 :: 25 : 1500. \\ \quad\;\; \underline{25} \\ 1)1500(1500 \end{array} \qquad \textit{Answer}, \text{ 1500 francs may be had for £60.}$$

If 100 francs be equivalent to 200 pauls, how many pauls may be had for 1500 francs?

$$\begin{array}{l} 100 : \;200 :: 1500 : 3000. \\ \qquad\quad \underline{1500} \\ 100)300,000(3000 \end{array} \qquad \textit{Answer}, \text{ 3000 pauls may be had for 1500 francs.}$$

which is evidently the answer originally required, as 1500 francs are equivalent to £60, the original *term of demand*.

In the course of these operations the term of demand, 60, is first multiplied into 25, then divided by 1, next multiplied into 200, and afterwards divided by 100. But it would obviously produce the same result to collect the multipliers and the term of demand into one product, and the divisors into another, and then to divide the former by the latter. The preceding case may, therefore, be stated thus:—

$$\begin{array}{rcl} & & \text{£60?} \\ \text{£1} & = & \text{25 francs} \\ \text{100 francs} & = & \text{200 pauls} \end{array}$$

$$\text{And } \frac{60 \times 25 \times 200}{1 \times 100} = \frac{300,000}{100} = 3000 \text{ pauls as before.}$$

By this mode of arranging the terms, it is obvious that those which would form the divisors in continued statements in the Rule of Three are multiplied together for a common divisor, and the other terms for a common dividend.

The same reasoning may be applied to those cases which involve three or more different questions. Hence the following

General Rule.—Arrange the several terms into two columns of antecedents and consequents, in this manner:—

1. In the right-hand column enter first the *term of demand*.

2. On the line below, and in the left-hand column, enter the first antecedent, which must be of the same denomination as the term of demand, and equal in value to the corresponding consequent placed contiguously in the right-hand column.

3. Similarly make the second antecedent of the same denomination as the preceding consequent, and equal in value to the annexed consequent, and so on throughout, introducing equations according to the nature of the case, and making the terms lead from one to another, so that the last term may be of the same denomination as the answer required.

Then multiply the antecedents together for a divisor, and the consequents, including the term of demand, together for a dividend, and the quotient will be the answer required.

Example.—Required the price per lb. avoird. of tea purchased in China at 30 tales per pecul of 133⅓ lbs.; 720 tales being equal 1000 dollars, and the rate of exchange 58 pence per dollar?

Arranging these data according to the preceding rules, we have—

$$\begin{array}{rcl} & & \text{1 lb.?} \\ 133\tfrac{1}{3} \text{ lbs.} & = & \text{1 pecul} \\ \text{1 pecul} & = & \text{30 tales} \\ \text{720 tales} & = & \text{1000 dollars} \\ \text{1 dollar} & = & \text{58 pence} \end{array}$$

$$\frac{1 \times 1 \times 30 \times 1000 \times 58}{133\frac{1}{3} \times 1 \times 720 \times 1} = \frac{1,740,000}{96,000} = 18\tfrac{1}{8} \text{ pence, the price per lb. required.}$$

The operations are in practice simplified by striking out the same numbers when they occur in different columns; or when terms in different columns are measured by the same number, by cancelling the original terms, and using the quotients in their stead. Fractions likewise are generally converted into whole numbers by multiplying both terms of the equations in which they occur by the denominator. Thus, multiplying the first equation of the preceding case by 3, we have 400 lbs. = 3 peculs.

Calculations of this kind are further facilitated by compounding the invariable terms into one result or *fixed number*, and applying the variable terms to it as multipliers or divisors, according to the state of the question. Thus, in the preceding case, the invariable terms are 133⅓ lbs. = 1 pecul (or its equivalent 400 lbs. = 3 peculs), and 720 tales = 1000 dollars; and collecting these into one result separately, and using the antecedents as the dividend, we have $\frac{400 \times 720}{3 \times 1000} = 96$, which will therefore form a fixed antecedent or divisor in the above and all analogous cases. In the above case we shall have simply $\frac{30 \times 58}{96} = 18\frac{1}{8}$ as before.

The chain-rule admits of being applied advantageously to a great variety of cases in commercial arithmetic, but it is in questions of exchange that it is chiefly employed. "Foreign merchants," says Dr Kelly, "are generally very expert in their application of this rule to commercial computations; and it is in a great measure to this that their acknowledged superiority in the science of exchange may be attributed." (*Cambist*, vol. ii. Introd. p. vi.) [EXCHANGE.]

CHALDER, a corn-measure in the former Scottish system, which contained 16 bolls. [BOLL.]

CHALDRON, a heaped measure formerly used for coals, lime, fish, potatoes, and other coarse commodities, but now prohibited (5 & 6 Wm. IV. c. 63); it contained 12 sacks, or 36 heaped BUSHELS. Also a weight for coals still used in London and Newcastle; the London chaldron = 25½ cwt.; the Newcastle chaldron of 3 wains = 52½ cwt., but estimated for boats at 53 cwt.

CHALK (Fr. *Craie*. Ger. *Kreide*. It. *Creta*. Por. *Creda*. Rus. *Mjel*. Sp. *Greda*) is a massive opaque *carbonate of lime*, of a white, grayish, or yellow colour, having an earthy fracture. Sp. gr. 2·5. It varies much in hardness, but is generally soft to the touch, and adheres to the tongue. It composes a large portion of the newest secondary rocks in the S. of England. When purified by trituration and elutriation, it is called *whiting* and *Spanish white*. Its uses are well known in furnishing lime for manure and cement, in polishing metals and glass, as a marking material, and in painting and whitewashing.

Black Chalk is a grayish, or bluish-black kind of clay, of a slaty texture, used both in drawing and painting. It is found in France, Spain, Italy, and Bayreuth.

CHAMOMILE, a useful herb (*Anthemis nobilis*), found plentifully in this country, especially on the commons near London. It is celebrated as a bitter; and an infusion of the flower-heads is much used in medicine. The bitter principle is strongest in the little yellow flowers of the disk, and the wild blossoms are much stronger than those of the cultivated sort.

A species of chamomile (*Anthemis tinctoria*) is raised in France for the sake of a brilliant yellow dye which is obtained from it.

CHAMPAGNE. [WINE.]

CHANKS are shells (*Voluta gravis*) of a spiral form, fished up by divers in the Gulf of Manaar, on the N. W. coast of Ceylon. There are two kinds, *payel* and *patty*, one red and the other white; the latter is of little value. These shells are exported to India, where they are sawed into rings of various sizes, and worn on the arms, legs, fingers, and toes by the Hindoos. A third species, opening to the right, is rare, and very highly valued. The demand for these shells, caused by the religious rites of the Hindoos, was formerly so great, that 60,000 rixdollars per annum were received by the government for the right of fishing them; but the demand decreased until the revenue became not worth collecting; and the fishery is now free to all.

CHARCOAL, a well-known impure form of *carbon*, obtained by the destructive distillation of various organic products; its characters and properties vary with its source. *Wood charcoal* is commonly made of oak, chesnut, elm, beech, or ash; the white and resinous woods are seldom used, and young trees answer better than large timber. It is a black, brittle, solid substance, easily pulverized, perfectly insipid, and inodorous. *Animal charcoal* is obtained generally from muscle, horn, hoof, or similar animal substances. It possesses the same general characters as the former, but often has a peculiar lustre and sponginess, and appears as if it had undergone fusion. Charcoal possesses remarkable antiseptic properties. It resists the putrefaction of animal matter; it also destroys the colour and smell of many substances. Common vinegar, by being boiled with it, becomes colourless; and red wines, rum, or brandy, may be bleached by filtration through it. It is largely employed for this purpose in the process of sugar-refining, and other arts. Animal charcoal has been found most efficacious for these purposes. Wood charcoal is mostly used for fuel, and in the manufacture of gunpowder. (*Brande's Chemistry.*)

CHART, a plan or MAP of a sea or coast, constructed for the purpose of ascertaining the position of a ship with reference to the land, and of shaping a course to any place. "The charts used in navigation are those on Mercator's *projection*, because on this alone the track of a ship always steering the same course appears a straight line; and thus all calculations respecting the latitude and longitude of a ship steering a course which cuts all the meridians at the same angle, are reduced to the utmost simplicity." (*Raper's Navigation.*)

CHARTER-PARTY, a branch of the contract of affreightment, is defined a contract, "by which an entire ship, or some principal part thereof, is let to a merchant for the conveyance of goods, on a determined voyage to one or more places" (*Abbot*, 162). It is executed by a deed duly written on a stamp, generally containing specification of the ship and her burden, the amount of freight, the limitation of the agreement by time or voyage, and the time of loading and unloading. The amount of demurrage is generally fixed. [DEMURRAGE.] In England, the execution of a charter-party by the master, though said to be done on behalf of the owners, does not furnish ground for a direct action against them, founded on the instrument. "This depends," says Mr Abbot, "upon a technical rule of the law of England, applicable as well to this as to other cases, and not affected by the mercantile practice of executing deeds for and in the name of absent persons; the rule of the law of England being, that the force and effect which that law gives to a deed under seal, cannot exist, unless the deed be executed by the party himself, or by another for him in his presence and with his direction, or in his absence by an agent authorized to do so by another deed; and in every such case, the deed must be made and executed in the name of the principal." By another technicality, if the agreement bear to be between particular parties, owners of a ship, whereof a certain person named is master, on the one side, and certain persons named, on the other, the master cannot bring an action in his name upon the covenants, nor give a release for them, though he seals and delivers the instrument. If, however, the covenants on the side of the owners bear to be by the master, with their consent, the owners can bring an action for fulfilment, though, unless they seal the deed, they cannot be sued (*Abbot*, 166). "In Scotland," says Professor Bell, "the charter-party is not trammelled by those technical rules which, to a stranger, appear to oppose so many bars to the efficacy of the contract, according to the jurisprudence of England. The contract, when duly executed by the owners or by the shipshusband, or by the master within the limits of his powers, is binding on the owners, and gives action direct in the Court of Admiralty [now in the Court of Session] against all concerned. It also, in general, contains a registration clause, in virtue of which it may be the ground of summary execution, without any necessity for a previous action." (*Bell's Com.* i. 539.)

The most important questions regarding charter-parties generally relate to the risks and responsibilities of parties arising out of the usual perils of the sea; compensation or damage for delays, alterations of the agreement, &c. Information on these subjects will be found under the heads AFFREIGHTMENT, BILL OF LADING, DEMURRAGE, and SHIPPING. (*Abbot and Bell*, ut supra. *Smith's Mercantile L.* 240-243.)

CHATTELS, OR CATALS, in the law of England, is an expression used to designate any description of property, moveable or immovable, except such as is, in its nature, freehold, or parcel of it. Chattels are either personal or real. Of the former, are shop goods and wares, household furniture and plate, corn sown, cattle, &c. Chattels real are such as are said to savour of the reality, *i. e.* which either are landed property or some continuous right issuing out of it, as terms for years of land, the next presentation to a church, &c. (*Jacob's Law Dictionary.*)

CHAYA-ROOT, a small slender root, yielding a scarlet dye, obtained from a plant (*Oldenlandia umbellata*), cultivated on the coasts of Coromandel and Malabar, and in Ceylon. In that island it was once monopolized by the government, but the monopoly has been relinquished. The colouring principle exists only in the bark. It is used in India to paint the red figures on chintz, &c., but is not esteemed by the dyers in this country.

CHECK. [CHEQUE.]

CHECK, a kind of cloth in which coloured stripes cross each other rectangularly. In this country, the checks chiefly manufactured are of a very coarse kind, suited for seamen's shirts, aprons, and common bed-gowns. The two principal seats of the trade are Blackburn and Kirkcaldy, the former in cotton, the latter, till of late, chiefly in linen. [PULLICATES.]

CHEESE (Du. *Kaas.* Fr. *Fromage.* Ger. *Käse.* It. *Formaggio, Cacio.* Por. *Queijo.* Rus. *Sür.* Sp. *Queso*), a species of food which consists of the caseous matter of milk, united to a certain portion of the oily or creamy part, which last adds to the flavour and richness of the cheese. Cheese, however, can be made from milk from which the cream has been removed, and it is then termed skimmed milk cheese. It may even be made from buttermilk; but then the creamy part being more withdrawn than in the case of skimmed milk, the cheese wants still more the properties and flavour which are valued. The poorer the cheese is the longer it will keep; but every variety, if well cleared from whey and sufficiently salted, may be preserved for years.

Cheese is made in large quantities in the dairy counties of England, particularly in Cheshire (where the annual produce is about 11,500 tons), Gloucestershire, and Warwick. "Single Gloucester" is made from skimmed milk, "Double Gloucester" from unskimmed,—the best being from the vale of Berkeley. The Wiltshire is equal to the best double Gloucester. The celebrated Chedder and Bridgewater cheeses are made in Somersetshire; though a somewhat inferior Chedder is often sold as double Gloucester. The cheeses known by the name of Stilton, which are chiefly made in Leicestershire, and those of Banbury in Oxfordshire, are of superior richness; the former is made by adding the cream of the preceding evening's milk to the morning's milking. Scotland produces little good cheese, except that called "Dunlop," made in Ayrshire and the adjoining counties of Wigtown and Kirkcudbright; the most esteemed is the Wigtown Dunlop. In Ireland only a small quantity is made, and that too of an inferior quality.

The most celebrated foreign cheeses are the Parmesan, a skim-milk cheese chiefly from Lodi in Italy; the Gruyere, from Switzerland, entirely of new milk; the Roquefort, of ewes' milk; and the Neufchatel, made of cream, thickened by heat; the last, a small cheese folded in paper, is imported as a delicacy from France. The foreign cheeses principally used in this country, however, are those from Gouda and Edam in Holland; of these the former is the finest, but the latter keeps longest, and consequently forms an important article in the victualling of ships.

Cheeses are frequently coloured with annatto, the juice of the orange carrot, or the flower of marigold, from the notion that a yellowish tint makes them look richer; Gloucester and Wiltshire cheeses are coloured deeply; Cheshire slightly; but Chedder, Stilton, and some other rich cheeses are never coloured.

Very little cheese is exported, but the quantity imported is considerable, being about 220,000 cwts., which, with the exception of about 1000 cwts. from Italy, France, and Germany, is brought exclusively from Holland.

CHEQUE is a written order on a banker by a person having money in the banker's hands, directing him to pay on presentment, or to bearer, or to a person named, a certain sum of money. Cheques partake of the nature of bills of exchange, in their indorsibility as the representative of cash. The cheque, however, being exempt from the stamp laws, is limited in its operation, so as to prevent it from performing the functions of a bill of exchange, and, being either a means of raising a credit, or an instrument by which a creditor at a distance from his debtor can convert the debt into a negotiable obligation. Such orders are exempt from stamp only if they be payable to the bearer on demand, and drawn on a banker within fifteen miles of the place where they are issued. The place of issue must be named, and the order must bear date on the day of issue, and must not direct payment to be made by bills or promissory notes (9 Geo. IV. c. 49, § 15. Sched. of 55 Geo. III. c. 184). These rules must be strictly observed. Where a person residing in a private house four miles from a town, dated a cheque drawn there as if drawn in the town, it was held unavailable for want of a stamp (Waters *v.* Brogden. I. *Young & Jerv.* 457). Cheques are exempted by 7 Geo. IV. c. 6, § 9, from the provision which prohibits bills under £5 from being negotiated in England except under certain restrictions. It is held that, in the ordinary course of business, a cheque cannot be negotiated so as to affect the drawer (*e. g.* in the case of the banker becoming insolvent), after banking hours of the day on which it was issued, but where the drawer is himself instrumental to the delay, he may continue liable to any onerous holder. It is the duty of the person receiving a cheque, whether from the drawer or an indorser, to present it for payment on the day on which he receives it, if it come to his hands early in the day, and otherwise on the day following; if he be at a distance, he should despatch it within the same time, if the Post Office arrangements admit of his doing so. Legal rules on these points cannot, however, be strictly laid down, and the above statements must be held as of a merely precautionary nature. A banker refusing to honour a cheque when he is in funds to the drawer, is liable in damages; but he is entitled to act on his own discretion where there are grounds to suspect forgery or fraud. [BILL OF EXCHANGE.]

CHEQUEE, a small Turkish weight. The chequee used in weighing gold, silver, and precious stones, contains 100 dirhems or drams, and is equal 4950 troy grains; but the chequee for goat-wool contains 800 drams, and that for opium 250 drams.

CHERRY, the well-known fruit of a tree (*Cerasus*), of which the Horticultural Society's Catalogue enumerates about 220 varieties. The cherry orchards of Kent are celebrated. The wood of the tree is close, takes a fine polish, and some sorts are adapted for tool-handles and cabinet-work.

"Several liqueurs are manufactured from cherries. A large black cherry is used in the composition of the *Ratafia* of Grenoble; and the *Maraschino* of Zara is prepared from a particular species of cherry cultivated in Dalmatia. *Kirschwasser*, which is a cheap spirit, forming a considerable article of commerce, is the fermented liquor of a small black cherry." (*Veg. Substances*, i. p. 341.)

CHESNUT, SWEET OR SPANISH (Fr. *Châtaignes*. It. *Castagne*. Sp. *Castanas*), is a dark-brown, ovate, sharp-pointed nut, or coat, containing a nutritive starchy kernel, of a sweet flavour, which is extensively used as food, either raw, roasted, ground, or otherwise prepared, in Italy, Spain, and the S. of France, where the tree (*Castanea vesca*) chiefly abounds. It is used in this country in a roasted state at desserts. The quantity annually imported fluctuates from 15,000 to 30,000 bushels.

The sweet chesnut is grown in several parts of England, but the fruit is of an inferior kind. The tree in a wild state sometimes attains an extraordinary size: On Ætna there is one called the hundred-horse chesnut, from its being able to contain 100 mounted men in its hollow. The timber is considered to be of equal value to that of the oak, and is applied to the same purposes.

HORSE CHESNUT (*Æsculus*) is a handsome tree, much used for ornamental purposes in this country, but as it is soft and spongy, its value is limited.

CHETWERT, OR TCHETVERT, the principal Russian corn-measure, equal 5¾ Imp. bushels nearly.

CHICA, a plant (*Bignonia chica*), growing on the banks of the Orinoco, from the leaves of which an orange dye is extracted. It is occasionally to be met with in the form of round cakes. In America it is used by the Indian tribes to stain their skins.

CHICORY, OR SUCCORY, is a hardy perennial plant (*Cichorium intybus*); found either in a wild or cultivated state in most parts of Europe. It has a strong and fleshy root, which when young is celebrated for its use as a substitute for coffee,—a purpose for which Dr Duncan thought it might be advantageously cultivated in this country. Its preparation consists merely in being cut into pieces, dried, and ground. The substitution of chicory for coffee was greatly encouraged by Bonaparte, in order to harass the trade of England; and the root is still thus used in many parts of Germany, Holland, and Switzerland. In this country it is well known to be extensively employed in the adulteration of coffee.

CHILLIES are long roundish taper pods, obtained from a shrubby plant (*Capsicum frutescens*), cultivated extensively in the East Indies. The pods are filled with a dry loose pulp, and contain many small, flat, kidney-shaped seeds. Their taste is extremely pungent and fiery; their colour when ripe is a bright orange red. They are occasionally imported dry, and are used as a condiment. They form the basis of Cayenne pepper and curry powder. The fresh capsicums used in Europe are chiefly procured from a species (*C. annuum*) found wild in the W. Indies and S. America.

CHILI, a narrow country extending nearly 1200 miles along the W. coast of S. America, betwixt lat. 25° and 44° S. It is bounded N. by Peru, E. by the Argentine Republic, S. by Patagonia, and W. by the Pacific. Area, including the Archipelago of Chiloë, but excluding the portion of Patagonia claimed by Chili, 130,000 sq. miles. Population 1,200,000, chiefly Spanish-Americans and Indians. It is divided into eight provinces. Capital, Santiago, a handsome inland city; pop. 60,000. The government has a republican form; the legislature consists of a senate and house of representatives; and the executive power is vested in the hands of a supreme director.

The lofty chain of the Andes runs along the whole eastern boundary of Chili, and the country below is composed, to a considerable extent, of valleys, surrounded by high mountains or ridges. The climate varies much in the different districts, but it is every where salubrious, and in the central provinces is similar to that of Italy. Rain occurs seldom except between May and August. Spring begins in September, and the hottest months are January and February. The northern provinces are in general dry and steril, destitute of wood, but rich in minerals. On the other hand, the southern provinces are humid, highly fertile, and abound in fine timber, but are much less rich in minerals. The chief metallic productions of Chili are gold, silver, and copper, but the steril condition of the provinces in which they are principally found prevents them being worked except where very rich. Gold is obtained both from the sand of the rivers and from mines; the total quantity in 1834 is stated, in a late consular return, at 3852 marcs; but no dependence can be placed on the accuracy of this report, as the metal is mostly exported in a clandestine manner to avoid the export duty, which is 4 per cent. *ad valorem*. The silver mines exist chiefly in the highest parts of the Andes, on which account few of them are worked; indeed they have been almost entirely abandoned since 1832, when some very rich ores were discovered about sixty miles S. of Copiapo. The quantity of silver obtained in 1834 is stated, in the consular return, at 164,935 marcs. The copper mines are exceedingly numerous between the cities of Copiapo and Coquimbo; and in 1834 there were exported 77,265 quintals of this metal in bars, besides 36,850 quintals of ore; while in 1838, the exports were, in bars, 89,537 quintals; in ore, 261,265 quintals. The total value of these minerals produced in 1834 was, gold, $525,231; silver, $1,484,416; copper, $1,148,501; total, $3,158,148, or £631,630. Mines of lead, tin, iron, and quicksilver are said to exist, but they are not worked. Coal is found in the southern provinces. The supply of salt is deficient. Intertropical plants do not succeed in Chili; and the sugar-cane, after being tried, was abandoned. Wheat is the great staple; barley and hemp are also leading objects of culture; and the latter is of a quality even superior to that of Russia. The vine and olive are also cultivated extensively; but the wine and oil manufactured are of indifferent quality. The rearing of stock forms an important source of wealth; the pastures N. of the river Maule are filled with innumerable herds of cattle; and swine are abundant in the Archipelago of Chiloë. The manufactures of the country comprise earthenware, hempen cloths, coarse cordage, soap, inferior copper wares, leather, brandy, tallow, and charcoal.

The internal commerce of the country is impeded by the defective means of communication. The high ridges, which every where separate the valleys, are passable only for mules; and the roads suited for carriages are almost confined to those between Santiago and Valparaiso and Conception; while of the numerous streams which flow from the Andes to the Pacific, none are navigable for any distance. The capital, Santiago, is the great emporium of the inland trade: it maintains a considerable intercourse with the mining districts and the coast; and also with the States of La Plata; the commerce with the latter being carried on chiefly through the pass of Aconcagua, on the road to Mendoza.

Chili is said to be almost the only Spanish-American state whose commerce has increased since the separation from the mother country. Its trade with the other S. American states chiefly consists in exporting wheat, flour, jerked beef, fruit, barley, beans, cheese, timber, wine, European and Indian goods, in exchange for tobacco, sugar, coffee, cotton, rice, salt, drugs, dye-stuffs, matte, hats, tocuyos (a coarse cotton linen from Brazil), and bullion. The exports to, and imports from, other countries are as follow:—China, exports, copper and bullion; imports, silks, nankeens, tea, sugar, and small articles. India, exports, copper; imports, sugar and coarse cotton goods. United States, exports, hides, copper, seal-skins, and bullion; imports, tobacco, spermaceti candles, oil, European and Indian goods, sugar from Havannah and Brazil; the annual value of the American imports is estimated at $2,500,000. Spain, no direct exportation; imports (by neutral vessels), wine, oil, and quicksilver. France, exports, bullion, hides, and copper; imports, wine, brandy, silks, linens, cloth, hardware, paper, perfumery, books, leather; the amount of the whole being estimated at $1,000,000. Germany, exports, bullion; imports, linens, cloth, glass, iron utensils, silks, cottons, spirits. Belgium, exports, bullion, hides; imports, British, German, and French manufactures. Britain, exports, bullion, Peruvian bark, saltpetre, indigo, cotton and sheep's wool, coffee, cocoa, hides, sarsaparilla, and copper; imports, British manufactures of all kinds, besides quicksilver, wines, rum, brandy, and other foreign and colonial articles. The declared value of British produce and manufactures sent to Chili in 1827 was £400,134; in 1830, £540,626; in 1833, £816,817; in 1836, £861,903; and in 1839, £1,103,073; but the Chilian estimate of the total average annual value of British goods imported in British and foreign vessels is $6,000,000. Of the British cargoes a great proportion is sold for export to Bolivia, Peru, Central America, and Mexico.

Valparaiso, in 33° 2′ S., and 71° 40′ W., the port of Santiago, is the centre of the foreign trade of Chili; pop. 20,000. It stands on a rugged promontory, forming, with the shore, a deep crescent, the concavity of which, opening to the N., forms the harbour, where ships of any size may ride in safety against all winds, except those from the N., which blow with great violence along the whole coast in the beginning of the rainy season. About 450 vessels arrive at this port annually, including about 100 British.

The chief other ports are, Conception, pop. 10,000; Copiapo, pop. 4000; Coquimbo, or La Serana, the principal port of the mining country, pop. 12,000; and Valdivia, pop. 5000. These towns have at different times suffered greatly from earthquakes, which are common throughout Chili, particularly in the interior. In the N. provinces slight shocks are felt almost daily.

Measures and Weights.—108 varas = 100 Imp. yds. 96 Chilian lbs. reckoned equal 100 lbs. Spanish, or 101·44 lbs. avoird. In other respects same as Spain.

Money.—Accounts are kept in dollars of 8 reals, each of 34 maravedis. The coins are, in gold, doubloons, half and quarter doubloons, and crowns: In silver, dollars, pieces of 4 and 2 reals, and ½ and ¼ reals: In copper, centaras and half centaras. The Chilian national dollar being coined at the rate of 8½ to the Castile marc, is equivalent in value to the Spanish hard dollar.

Finances.—According to the reports to Congress, the revenues for 1834-35-36 amounted to $5,697,666, averaging yearly $1,899,222. The expenditure during the same years was $6,578,555, averaging yearly $2,192,851; leaving an annual deficit of $293,629, exclusive of interest on the foreign debt. The domestic debt amounts to about £5,000,000. The foreign debt amounts to £1,000,000, raised by the issue of bonds in this country in 1822, bearing interest at 6 per cent. The Chilian loan was contracted with Messrs Hullet Brothers at 70 per cent.; and the dividends remain unpaid since September 1826.

CHINA, the *Celestial Empire*, situated in the E. of Asia, is bounded N. by Asiatic Russia; E. by the Pacific Ocean; S. by Gulf of Tonquin, Annam, Birmah, and British India; W. by British India, Independent Tartary, and Asiatic Russia. It comprises China Proper, area, 1,300,000 sq. miles; pop. 360,000,000: Chinese Tartary, area, 3,300,000 sq. miles; pop. 12,000,000: and Thibet, area, 750,000 sq. miles; pop. 5,000,000. The capital is Pe-king, in 39° 50′ N., 116° 30′ E.; pop. 2,000,000. The government is a despotic monarchy, and the emperor is designed

"Son of Heaven," and absolute lord not only of China, but of the world. A peculiar character, however, is given to the constitution, by a provision for securing intelligent functionaries in the different branches of administration. These must be persons elevated to the dignity of *quans* or mandarins, by their proficiency in learning. The highest class reside at the capital, as state councillors, public censors, or as members of the six *pous* or boards, to whom are confided the different branches of administration; and from the other classes are chosen provincial governors and subordinate officers.

Chinese Tartary and Thibet are comparatively thinly peopled territories, inhabited by wandering and semi-barbarous tribes, who are held as tributaries, or under loose military government, without any attempt to impose on them the laws and general character of China itself. The source of the vast wealth of the state is to be found in China Proper, the local features of which are understood to possess the same character of vastness which generally distinguishes the empire. Her provinces equal our kingdoms, her towns our capitals, her villages most of our cities; yet all these are pervaded by a certain sameness approaching to monotony. The number of provinces is eighteen, and these are subdivided into districts, each dependent on one of the great cities. These last, according to their importance, are arranged in three classes, generally expressed by the terms *fou*, *tcheou*, and *hien* annexed to their names; as, Kai-fong-*fou*, Lan-*tcheou*, Yuen-*hien*. The northern, central, southern, and western provinces possess each peculiar and distinctive characters.

1. *The Northern Provinces*, Pe-che-lee, Shan-tung, and Shan-see, consist of very extensive plains, rising on the N. and W. into mountains or high table-land, which form the lower declivity of the lofty chain that traverses Mantchoo Tartary. The winter is extremely rigorous compared with that of European countries under the same latitude; so that all the rivers, not excepting the largest, are then frozen. Hence, though the summers are proportionally hot, the more valuable articles of rice, silk, and tea, which constitute the pride of Chinese culture, cannot be reared; even wheat does not successfully resist the cold, and millet is therefore the standard grain. The high grounds wear somewhat of a pastoral aspect, and support several domestic animals, which have been banished from the more cultivated provinces. The fine manufactures that distinguish China are also unknown, though there are some remains of the woollen fabrics in which she anciently excelled. The mineral products consist of iron, large quantities of coal, with lapis-lazuli, and other varieties of beautifully coloured stone. This district contains the capital, Peking, which is situated in Pe-che-lee; and its northern boundary for 1500 miles is the celebrated Great Wall, composed of two parallel brick walls, twenty-four feet in height, and twelve feet apart, the interval between which is filled with earth, and towers are erected at distances of 300 or 400 feet.

2. *The Central Provinces* consist of Kiang-nan, Tche-kiang, Kiang-see, Ho-nan, and Hou-quang. The first and the last have each been divided into two; yet the original appellations of both are still retained, and they form decidedly the finest part of the empire. All its most valuable productions, all its finest fabrics, are here reared or manufactured. This territory consists, with little interruption, of an immense plain, through the midst of which flows the great river Yang-tse-kiang, while the numerous tributaries which fall into it from both sides, as well as those flowing northwards to the Hoang-ho, render it one of the best-watered regions upon earth. Indeed, the excess of moisture, as it renders some districts marshy, is the chief disadvantage under which it labours. Kiang-nan is the province in which the riches and beauty of this part of China are most amply displayed; all the products of nature and art being carried to a perfection unequalled in any other. The rice and wheat are excellent; the silk is rivalled only in Tche-kiang; cotton is nowhere so good. The song-lo or green tea, the most delicate of that species, grows only on the hills of Kiang-nan, and in Tche-kiang, chiefly the former. The people are said to be more intelligent, and Nan-king, its chief town, was in former ages the capital, and still is the literary metropolis of the empire, and its finest city. It is celebrated for its porcelain tower, and for its flourishing manufactures;—the satins; the cotton cloth bearing its name; and its ink and paper, which are superior to any made elsewhere. Tche-kiang, the rival of Kiang-nan, forms, in a great measure, a continuation of the same vast plain, equally fertile and beautiful. In particular, it is completely pervaded by rivers and canals, covered with innumerable barks. All the tropical productions flourish here to a great extent; but that of silk is particularly distinguished for its quality and abundance. The commerce and manufactures of its capital, Hang-tcheou-fou, rank it with the greatest cities in China. Silks, particularly flowered taffetas, and different kinds of satin, are its peculiar staple. Kiang-see, though to a considerable extent mountainous or marshy, shares in some degree the manufactures of the neighbouring provinces, but is chiefly distinguished for the finest porcelain, which is exclusively confined to King-te-tching, one of its towns, said to contain 1,000,000 inhabitants. The other provinces in this district are less distinguished for their productions, whether natural or artificial.

3. *The Southern Provinces* are composed of Quang-tung, or Canton, Fo-kien, and Quang-see. These consist of the level country intervening between the sea and the extensive mountain-chain which is prolonged from the Himmaleh, along the whole south of China, with an elevation diminishing in its progress eastward, and which forms a steep barrier separating them from the rest of the empire. High ranges also shoot across them, and terminate in rugged cliffs. In the intervals, however, are many valleys, and even extensive plains, that rival the finest of the central provinces, and are cultivated with equal diligence, though they yield no very valuable productions, except the bohea tea, reared chiefly on the hill-slopes of Fo-kien. The manufactures are various and actively pursued, yet none of them can match those of Nan-king, Hang-tcheou-fou, and King-te-tching. The coast, however, is the seat of nearly all the foreign trade of the empire. Its position relative to the eastern peninsula and archipelago, its fine harbours, even the ruggedness of many of its districts, seem to have united in turning the industry of the people into this direction. Canton is the well-known seat of the trade with Europeans and their possessions in India; while the Chinese junks sent to the neighbouring coasts and islands are almost all fitted out from the ports of Fo-kien. A bolder and more enterprising race, addicted to maritime adventure and even to emigration, inhabits these shores.

4. *The Western Provinces* bordering on Tartary are Shen-see, Kan-su, Se-tchuen, Koei-tcheou, and Yun-nan, but our knowledge of them is more imperfect than of any other quarter. Ac-

cording to every description hitherto received, their aspect, productions, and social state differ very widely from those of the other parts of the empire. The mountains are much loftier; and their recesses are occupied to a great extent by the Miao-tse, Lolos, and other independent and almost savage tribes. This region, however, is not altogether steril or unproductive; there are some extended plains, and the mountains are generally interspersed with rich and beautiful valleys. The store of metals and minerals is particularly ample, including gold, silver, and copper. On the hills of some districts are rhubarb and other medicinal plants; and among the numerous wild animals is the one which yields musk. The rivers afford commodious channels for transporting those articles through the whole empire.

Besides these eighteen provinces on the continent, the Chinese possess various islands on the coast; the principal, Formosa, being on the west, and Hainan on the south. The former is mountainous, and inhabited by barbarians, apparently of Polynesian origin. The latter is considerable, and is occupied in the interior by rude natives, and on the coast by the Chinese, rearing productions similar to those of the adjoining coast of Quang-tung.

The Chinese have been represented as averse to all traffic; but more accurate information seems to establish the fact that no people are more solicitous to acquire riches, or less fastidious as to the means; and that the wealthy class are as desirous as in any other land to procure whatever appears to them useful or agreeable, without any scrupulous inquiry as to how or whence it comes. *The Internal Trade* of this vast country constitutes by far the most important part of its commerce. The variety of climate and productions throughout the empire renders the provinces mutually dependent upon each other, and affords ample scope for exchange; while the traffic is increased by the circumstance that the court, and with it the great body of opulent families, is resident at Pe-king, near the northern frontier, and in a country which yields scarcely a single article of elegance or luxury. Tea, the universal beverage, though produced in almost every province, is not to be found of fine quality except in the few districts already mentioned. Rice is raised only in the central and southern divisions, whence the whole consumption of the north must be furnished. Sugar is confined within nearly the same limits. The silk and cotton manufactures are carried to perfection only in the great cities of Kiang-nan and Tche-kiang: porcelain only at King-te-tching. Timber grows only on the mountains, and chiefly on the southern range. Salt, a government monopoly, exists in mines as well as rock springs, but is principally procured from sea-water on the eastern and southern coasts. Huge stacks or rather hills of salt seen at Tien-tsin were estimated by Mr Barrow to contain 600,000,000 lbs. Although these are the principal commodities, there are obviously many others, the conveyance of which, on a scale requisite for the wants of so vast a population, must give occasion to a very extensive commerce. This great trade is conducted almost entirely by means of water communications, consisting not only of the great rivers, particularly Hoang-ho and Kiang-ku, with their tributaries; but also of canals, with which almost the whole empire is furrowed, and upon which the Chinese have made the most lavish display of their industry and resources. The principal is the Imperial Canal, which extends 500 miles in Shan-tung and Kiang-see. Compared with this grand system of water-communication, land-carriage is little regarded, and few of the roads are better than footpaths; though when one does become actually necessary to connect any of their points of intercourse, the inhabitants spare neither labour nor cost in making it complete. The coasting trade is discouraged by government on account of its diminishing the internal transit-dues. It is, however, pretty extensive; and centres chiefly in Amoy, Fou-tcheou-fou, and other ports of Fo-kien, which form a link between the northern and southern provinces. Ning-po and Sha-poo in Tche-kiang, and Shang-hai in Kiang-nan, are also extensive ports. At the latter, which ranks next to Canton in commercial importance, the officers of the Amherst in 1832 saw, in 7 days, 400 junks of from 100 to 400 tons burden enter from the north bringing flour and pease. There are several other emporia along the northern coast, particularly Tien-sing in the metropolitan province of Pe-che-lee. In the southern provinces, Ching-hai, about 200 miles E. from Canton, is the seat of a flourishing commerce. The towns to the westward are of secondary importance, and very little known.

The External Commerce is inconsiderable when compared to the great resources of the country. This has arisen partly from the variety of productions and manufactures exchanged by means of the vast internal trade, but chiefly from the intercourse with Europeans being prohibited except at the single port of Canton, a port most unfavourably situated for foreign commerce, from its lying on the south coast, far removed from the most fertile and populous provinces, and at the farthest extremity from the metropolitan province. The policy of thus confining the European trade to a place so little suited to its extension, is attributed to the desire of the Chinese government to remove the danger of foreign quarrels from the neighbourhood of the capital, and to derive the largest possible revenue from transit-dues. In the early period of European intercourse with the east, a more liberal spirit prevailed, and the English East India Company possessed factories both at Tay-wan in Formosa, and at Amoy. Owing to losses sustained at these establishments they were after some years abandoned, and the trade removed to Canton. The oppressive exactions at the latter place induced the English to re-open the communication with Amoy; but in 1757, all attempts of this kind were foreclosed by a decree of the Emperor Kien-long, strictly limiting European intercourse to Canton. Since that time various endeavours have been made by the British and other European states to improve their commercial relations with China, but without success. Lord Macartney's embassy in 1792 failed in procuring more than some slight relaxations at Canton; and Lord Amherst's in 1816 led to no result whatever; partly it has been said from his lordship's refusal to perform the celebrated homage of the *ko-tou* to the emperor, though it would appear that this was done "in full solemnity" by a Dutch ambassador in 1794, with no other result than contempt for his servility.

Exports.—The staple export of the empire is tea. [TEA.] As already noticed, the black tea is obtained chiefly from Fo-kien, and the green from Kiang-nan; but of late years the cultivation of the former for exportation has extended to Quang-tung, and of the latter to Tche-kiang. The traders generally begin to arrive in Canton early in October with the crop of the season; though with the exception of the kinds most in demand, teas may be had throughout the year. In November the trade may be considered at its height. Teas are exported principally to Europe (particularly Great Britain) and the United States; besides which, a considerable quantity is sent to our possessions in India and Australia; and a much larger to every country of Asia which contains Chinese emigrants,—such as the Annam Empire, Siam, and the Eastern Islands. The Russians, who are prohibited from trading with the Chinese by sea, receive their supply overland, as do all the Tartar nations, who have acquired a great relish for this article. The commodity next in importance is raw silk, which is raised and manufactured in the provinces of Kiang-nan Fo-kien, Tche-kiang, and Quang-tung; but the silks brought to Canton are those of Kiang-nan or Nan-king, and of Quang-tung only; and the first is generally double the value of the last. There is no article which shows in a more remarkable manner than this the capacity of extended production possessed by China. The British exports, which form by far the most considerable part, and which averaged only, under the East India Company, about 94,000 lbs. until 1834, when the trade was opened to private adventurers through the medium of Singapore, having now increased to 1,400,000 lbs., without producing any sensible advance in the price of the article. The next commodity, if rated according to its importance, is sugar, which is of two descriptions,—clayed or soft, and sugar-candy; this last being the nearest approach to the refined variety yet made by the nations of the East. The only manufactures for foreign trade are in Quang-tung and Fo-kien; and, in so far as refined sugar is concerned, the produce of the former is fully 75 per cent. better than that of the latter. The quantity exported is from 8000 to 9000 tons. In former times, the shipping of this article was confined to a small portion sent to the western coast of India, and it is only within the last 25 years that it has been brought to Europe. Nan-king cloth still continues to be exported in large quantities; also manufactured silks, notwithstanding the improvement made in this branch of industry in Europe. The principal purchasers of the latter are the Americans, who export to the amount of about $1,500,000. Cassia-lignea and cassia-buds are produced abundantly in the forests of Quang-tung and Quang-see, and about 4,000,000 lbs. are exported by the British and Americans. Camphor, found also in the forests of Quang-tung, is exported largely, but the quantity varies much from year to year. There are likewise brought to the market of Canton rhubarb, musk, aniseed, turmeric, orpiment, galangal, and cinnabar.

The superior industry of the Chinese as compared with other Asiatic nations is proved by their extensive exportation of manufactured articles. To those already enumerated the following may be added; alum, white lead, red lead, brass leaf, tutenague or zinc, false-pearls, glass-beads, paper, paper-hangings, toys, table and floor mats, and china ware, with the precious metals. Alum is prepared in the distant province of Kiang-see, which supplies, we believe, the whole east with this mineral. The paper of China is greatly inferior to the European fabric, but being much cheaper, it is used even in our Indian settlements for all ordinary purposes. Their porcelain was largely exported before the western nations borrowed the art, and is still an important article of commerce, especially to the Eastern Islands, Siam, and Annam. The total value of manufactured articles exported by the English and Americans in 1834, exclusive of raw silk, refined sugar, and bullion, amounted to nearly £500,000.

Of late years bullion has been very largely exported from China. In 1834, the quantity of silver exported in British shipping amounted to $6,217,820; and of gold to $513,795, making together, at 4s. 2d. per dollar, £1,402,420. Of this the amount of native or *sycee* silver was $5,119,304; and if to it be added the export of native gold, we shall have a total export of the precious metals, the produce of that country, equal to £1,197,035.

China, besides exporting native productions, is also an entrepôt for those of the neighbouring countries, and occasionally even for the manufactures of Europe, India, and America. Among these may be mentioned mother-of-pearl, tortoise-shell, cloves, canes, and rattans; dragon's-blood, and cubebs, the produce of the Eastern Islands; gamboge, procured in Cambodia; saltpetre and opium, the produce of India; and cochineal and copper from America.

The principal articles carried to Great Britain in the year 1838 were,—38,998,572 lbs. tea; 702,677 lbs. raw, and 18,840 lbs. thrown silk; 21,870 pieces bandanas, &c.; 8451 shawls, scarfs, and handkerchiefs; 3699 pieces taffetas, damasks, &c.; 55,811 lbs. rhubarb; 44,142 lbs. cassia; 5852 lbs. cinnamon; and 59,038 pieces of cotton. The American exports, which, next to the British, are by much the most important, amount annually to about $9,000,000, or £1,875,000, of which nearly two-thirds are in tea.

The Imports may be divided into those from continental India,—those from the Eastern Islands, Annam, and Siam,—those from Great Britain,—those from America,—and those from other countries.

Of the imports from continental India by far the most important is opium, though the use of this well-known drug is prohibited by the laws. [OPIUM.] In the year 1817-1818, the quantity imported was 2435 chests, but in the year 1835-1836, it had increased to 26,018 chests, amounting in value to $17,106,903, or £3,563,938, probably the largest sum given for any raw article supplied by one nation to another, if we except the raw cotton furnished to Great Britain by the United States. The next article of importance is cotton-wool, one of the oldest branches of trade betwixt the countries, and, until opium took the lead, by far the most considerable. The market for this production is not supposed to extend beyond Quang-tung and Quang-see, where it is said to be chiefly made into quilting-cloths, to be used as winter dresses. The cotton fabrics of India have never, however, found a market in China,—the people having no fancy for fine muslins, while the ordinary Indian cottons are neither so substantial as their own, nor so much cheaper as to create a demand. The other articles imported are of inferior value; they consist of black pepper, in small quantity, from Malabar; catechu from Pegu; myrrh and olibanum, productions of Arabia; assafœtida, procured in Persia; putchuck from Guzerat; also saltpetre, sandal-wood, sharks'-fins, fish-maws, bezoar, pearls, and carnelians.

The following tables exhibit for a series of years the course of trade between China and the different presidencies, according to the valuations thereof in the Indian accounts, estimating the rupee at 2s. sterling:—

IMPORTS INTO CHINA FROM INDIA.

Years.	Bengal.		Madras.		Bombay.		Total.	
	Merchandise	Treasure.	Merchandise	Treasure.	Merchandise	Treasure.	Merchandise	Treasure.
	£	£	£	£	£	£	£	£
1832-1833......	1,180,830	3,200	33,103	..	1,489,289	..	2,703,222	3,200
1833-1834......	1,323,685	3,743	34,411	670	2,205,942	..	3,564,038	4,413
1834-1835......	1,270,770	1,125	40,484	..	1,560,855	..	2,872,109	1,125
1835-1836......	2,019,183	2,295	172,234	1,312	2,245,674	880	4,437,091	4,487
1836-1837......	1,912,172	3,392	270.063	1,519	3,266 625	880	5,448,860	5,791

EXPORTS FROM CHINA TO INDIA.

Years	Bengal.		Madras.		Bombay.		Total.	
	Merchandise	Treasure.	Merchandise	Treasure.	Merchandise	Treasure.	Merchandise	Treasure.
	£	£	£	£	£	£	£	£
1832-1833......	93,944	221,243	26,138	604	333,230	353,834	453,312	575,681
1833-1834......	100,817	375,859	10,531	..	430,611	907,846	541,959	1,283,705
1834-1835......	119,203	329,033	37,787	700	358,353	855,923	515,343	1,185,656
1835-1836......	59,690	329,480	12,887	2,146	457,572	956,728	530,149	1,288,354
1836-1837......	107,506	233,167	17,471	..	400,567	1,007,428	525,544	1,240,59

The imports from the Eastern Islands and peninsula consist of the following articles:—Bêche de mer, betel-nut, Malay camphor, nutmegs, elephants' teeth, sharks' fins, pepper, rice, sapan-wood, cubebs, gamboge, tortoise-shell, mangrove-bark, bees' wax, birds' nests, cloves, ebony, fish-maws, gambir rattans, sandal-wood, tin, dragons' blood, mother-of-pearl, gold, eagle-wood, benjamin. China, like every other country which is densely inhabited, is deficient in the supply of timber and dye-woods. It is supplied by the neighbouring provinces, therefore, which are in a rude state; and if capital were abundant and freights low, they would export a much larger amount. Rice is also an article of great importance. Owing to the vast population and its consequent pressure on the means of subsistence, the value of rice is commonly double in Canton what it is in the neighbouring countries. The government, in respect to the importation of this article, adopts an unusually liberal policy, exempting all ships with cargoes of it from harbour charges, and from the greater part of the customary fees. It is usually brought from Java and the Philippines, and recently from Singapore. In 1834, the quantity imported in British vessels was 15,406 tons, and in American, 7412 tons, making a total of 22,818 tons, valued at £153,903. This is a branch of trade likely to become of vast importance; for it is at present in its infancy.

The imports from Europe are almost wholly from Great Britain. Those of most importance are woollens, cotton goods, and cotton-twist; iron, steel, lead, spelter or zinc, and quicksilver; the minor articles being cudbear, smalts, flints, tin-plates, clockwork, and machinery. Woollens have always been much in demand in China; and those used are chiefly broadcloths, camlets, and long-ells, which find their way throughout nearly the whole empire. The cold winters, even of the most southern provinces, render such fabrics a comfortable wear; and, considering the diminished supply and high price of furs, it is probable that the demand for them will go on increasing. A more decided expansion, however, would be given to the woollen trade, were the Chinese to allow of foreign intercourse at one of the northern ports. In order to be consumed at Pe-king, our woollens must travel 1200 miles, and cross the mountain-barrier, at the foot of which they are unladen from boats, and carried across the pass called Mei-ling. The consequence is, that not more than one-ninth of our woollen exports is consumed in the northern provinces, including the capital, as proved by Mr Ball. It is only since the opening of the trade in 1814, that our cotton goods have been received in China, and yarn was not imported until about the year 1827. The descriptions of calicoes most in request are chintzes, long-cloths, muslins, cambrics, and bandanas, scarlet and blue. The twists in demand range from No. 16 to 36. The metal goods imported are almost entirely consumed in the province where they are landed, as they cannot bear the expense of lengthened land-carriage and transit-dues; and this branch of trade is therefore of limited amount, owing to the restriction already alluded to. Of the minor articles it is not necessary to speak at large. Watches have long been taken, and generally by the ton or half ton. The fancy of the Chinese is to wear them in pairs, in accordance with a pretty general prejudice in the East against an odd number. Scarlet cuttings, or the tailor's refuse of scarlet cloth, is so regular an object of trade as always to be quoted in the printed Price-current. The increase in the import of British produce and manufactures has been very considerable since the opening of the trade in 1833; their average annual amount in the five previous years having been £614,368; while the average amount in the five years, 1835 to 1839 inclusive, was £1,027,161; thus showing an increase on the annual declared value amounting to £412,793. In 1838, the amount was £1,204,356, the principal articles being—woollen manufactures, £409,762; cottons (22,133,621 yards), £519,098; cotton-twist and yarn (3,851,365 lbs.), £217,047; hardware and cutlery, £5014; apparel, £2741; plate and jewellery, £5143; iron and steel, £9397; lead and shot (348 tons), £6700; linens (90,349 yards), £3927; beer and ale (203 tuns), £3809; and glass, £2368. Of foreign and colonial articles, there were also imported in the same year, from Great Britain, 11,632 lbs. cochineal; 4500 musquash, and 4914 otter furs; 766 tons pig lead; 167,764 lbs. quicksilver; besides about 2500 gallons of brandy and Geneva, and about 8000 gallons wine, chiefly Spanish and French.

The imports from America are almost wholly by U. S. shipping, and consist of Spanish dollars, furs, ginseng, Turkey opium, Chili copper, occasionally cotton-wool, cotton fabrics, woollens, quicksilver, wines, spirits, and generally all articles supplied by the English. They bring also sandal-wood from the Sandwich and Fejee Islands, and pepper, tin, and other commodities, technically known by the name of Straits' Produce; that is, the produce of the Straits of Malacca, comprehending generally that of all the western countries of the Malayan Archipelago. They also bring cargoes of rice from Java and Manilla. The trade in furs was created by that people; and the skins usually imported are those of the rabbit, seal, sea-otter, land-otter, beaver, and fox. They are conveyed direct from the north-west coast of America, and of late years, from the recently discovered land of New South Shetland. In the year 1832-1833, the Americans imported into China cargoes to the value of $8,362,971; but in 1837 they only amounted to $630,591.

To the Indian, British, and American trade must be added that of the Portuguese, Spanish, Dutch, and French, with an occasional ship from Denmark and Sweden. The trade under the Portuguese flag is very considerable, conducted chiefly through the ports of Damaun, Goa, Bombay, and Calcutta, and employing annually from 13 to 22 ships; and the joint imports and exports are estimated at $5,000,000. The Spaniards employ a number of small vessels belonging chiefly to the Philippines. In the parliamentary papers their trade is stated at $500,000; while that of the Dutch is given at $742,693. The French commerce occupies 4 or 5 ships yearly, and is valued at $500,000. The foreign trade of the native craft is confined to the eastern seas, and is estimated at $20,000,000; employing about 80,000 tons of shipping.

Canton, or Quang-tcheou-fou, the emporium of the foreign trade, is seated in lat. 23° 7′ N., long. 113° 14′ E., on the N. side of the Choo-kiang or Canton river, 80 miles distant from the open sea. Vessels in the regular trade proceed first to Macao [Macao], at the entrance to the estuary, where they are reported to a Chinese officer, who, on receiving satisfactory answers to his inquiries, grants a permit for them to pass through the Bogue (or mouth of the river). They then proceed upwards to Whampoa, the shipping station, situated about 14 miles below Canton. The city is walled, and with the suburbs, which are nearly of equal extent, contains a population of about a million. Europeans are not admitted within the gates; their business is transacted at factories situated in the S. W. suburb, on a muddy flat contiguous to the river. There are at present four factories, the British, American, Dutch, and French; the first is the least objectionable, but all are incommodious. They belong to a body called the *Hong* or licensed merchants; of whom every vessel is required to have one as security for the duties, and for the conduct of the crew. These merchants never hesitate to undertake the responsibility for any ship that offers; and although the law declares that foreigners shall trade with them only, this is evaded by the purchase of a small quantity of goods from one of their number, and, under a sort of license from him, a traffic is then openly carried on with the *outside merchants*, or natives generally. Shipmasters are required to declare that they have brought no opium.

Trade is conducted with punctuality and despatch. The number of foreign merchants is about 100, mostly British, or Americans, with Parsees and Mohammedans from Bombay and Surat. Their residence at Canton, however, is only allowed during the business season, commonly from October until the setting in of the westerly monsoon in the beginning of March. During the remainder of the year they reside at Macao.

The public affairs of the Americans, French, and Dutch are managed by consular agents, who, although not publicly recognised by the imperial government, are virtually so by the provincial administration, which transacts all business with them through the hong merchants. The British intercourse is regulated by the act 3 & 4 Wm. IV. c. 93, which appointed three commissioners for its superintendence, but whose duties have been since devolved on one, who has power to issue directions respecting commerce, and for the government of our countrymen in China and within 100 miles of its coast. Section 8 of the act provides that a duty on tonnage not exceeding 5s. per ton, and on goods not exceeding 10s. per cent. *ad valorem*, may be levied on shipping, in order to defray the expenses of the establishment.

Measures, Weights, Monies, Duties, &c.

Measures and Weights.—The covid of 10 punts = 14·625 inches, or 32 covids = 13 Imp. yards; and the li of 180 fathoms = 632 Imp. yards; 200 lis = 1 degree; there are no measures of capacity, liquids and grain being sold by weight.

The tael of 10 mace, 100 candareens, or 1000 cash, = 583⅓ troy grains (but in weighing money estimated at 579·84 grains); the catty of 16 taels = 1⅓ lb. avoird.; and the pecul of 100 catties = 133⅓ lbs. avoird. Hence 3 peculs = 400 lbs. avoird., 84 catties = 1 cwt., and 12 taels = 1 lb. avoird.

Money.—Accounts are stated by foreign merchants in dollars and cents; but by the Chinese in taels (*leang*), of 10 mace (*tseen*), 100 candareens (*fun*), or 1000 cash (*le*), which, except the last, however (a small piece of copper and zinc with a square hole in the middle), have no representatives in coins, and are rather money weights. The tael is the weight (1·208 oz. troy) of *sycee*, or silver reputed to be pure, and as such would be worth about 6s. 6d.; but it is commonly valued among foreign merchants according to its rate of exchange for dollars. In converting taels of account into dollars, 720 taels are reckoned equal to $1000; though in weighing money 717 taels are reckoned for $1000, making the value of the tael of dollar silver about 5s. 10d. This is, however, subject to variation.

The fineness of the precious metals is expressed by dividing their weight into 100 equal parts called *touch*,—an ingot of 94 touch being understood to contain 94 parts of pure metal and 6 of alloy. The *sycee* silver used in ingots, as a substitute for money, is never perfectly pure; in commerce it is seldom found above 98 touch. That received of late years for opium at Lintin has been found to contain a considerable admixture of gold, which has enhanced its value.

Remittances to China may be made either direct or in bills on Calcutta, Madras, or Bombay, to be sold in Canton. At Canton, bills on London are drawn at 6 months' sight, the usual rate being about 4s. 10d. per dollar.

Duties and Port Charges.—The export and import duties are always paid by the Chinese, so that they appear mixed up with the price of the articles, and the foreigner only knows that they exist. In the Canton commercial guide there is a list of the duties on a few articles. These are specified taxes upon the quantity; and a few examples of their operation as *ad valorem* duties may be here given, taking prices as they stood in 1834. The duty on English iron amounted to 18 per cent.; on Indian cotton wool, 14 per cent.; on Bohea tea, 20 per cent.; and on Congou, 10 per cent.

Vessels at Whampoa are subject to a variety of charges; on the Glenelg, of 867 tons burden, the whole were stated by Mr Martin to amount to 4959 dollars; of which, measurement charge, $2363; cumshaw or present, composed of entrepôt, clearance, and other fees, $2223; fees to linguist and comprador, pilotage, bar-boats, &c. $373. But vessels loaded with rice are exempted from the measurement charge; also from the entrepôt and leang-tous fees, comprising the greater part of the cumshaw.

The heaviness of the port charges, particularly on small vessels (the cumshaw being the same on all), joined to the contraband nature of the opium trade, have led to an extensively organized system of smuggling at Lintin. At this island, situated at the mouth of the river, small vessels tranship their cargoes into large ones; ships are also stationed here with rice, which they sell in sufficient quantities to vessels newly arrived, to exempt from port charges. It is likewise the chief seat of the opium trade, and ships are constantly lying as depôts for the drug. Many other smuggling vessels lie at the same station; and even the price current states articles as deliverable in the course of the regular trade and in that by smuggling indiscriminately. All this contraband traffic is conducted in the presence of the imperial fleet,—a sufficient proof, if any were wanting, of the corruption of the native officers.

In the preceding article, we have confined our attention to the course of trade as it existed prior to the seizure of the British superintendent, Captain Elliot, by Commissioner Lin, in April 1839. A narrative of the hostile operations which followed that event would be out of place here; but should any new arrangements be made with the Chinese government before the work is completed, they will be noticed in a supplement. For other details we refer to the articles Opium and Tea.

CHINA-ROOT, a large tuberose knotty root, of a dark reddish-brown colour on the outside and reddish-white within, produced by a species of smilax (*Smilax China*). It was formerly imported from China, and employed in medicine, but of late years it has been much neglected by European practitioners. Various species of smilax are common in Jamaica, where the root is in great repute, and held equal in quality to the oriental kind. (*Ainslie's Mat. Indica.*)

CHINCHILLA, a little quadruped (*Chinchilla lanigera*) celebrated for the beauty of its fur, which exceeds in warmth and softness that of any other animal, and has long been known as an expensive and useful article in the dress of ladies. The fur, or rather wool, is of an ash-gray colour, and sufficiently long for spinning. In length, the creature is six inches from the nose to the root of the tail, with small pointed ears, a short muzzle, teeth like the house-rat, and a tail of moderate length. It belongs to the *Rodentia*, or gnawing animals, and lives in burrows under ground, in the open country, in the northern provinces of Chili. [FUR.]

CHINTZ (Du. *Sits*. Fr. *Indiennes*. Ger. *Zitse*. It. *Indiane*. Por. *Chitas*. Rus. *Sis*. Sp. *Chites*, *Zarasa*), a peculiar style of fast-printed calico, in which figures of many different colours are impressed upon a white or light-coloured ground.

CHLORATE, OR OXYMURIATE OF POTASH, an interesting compound of chloric acid and potash, which, when strongly triturated, crackles, throws out sparks, and becomes luminous. It is extensively manufactured in consequence of its use in the preparation of light-matches, and a detonating priming for firearms having percussion-locks.

CHLORIDE OF LIME, OR BLEACHING POWDER, is prepared by passing chlorine into chambers containing fresh slacked lime in fine powder, by which the gas is copiously absorbed, with extrication of heat. It is a dry white powder, possessing a faint odour of chlorine, and a strong penetrating taste. When agitated with water, a portion is dissolved; and the solution, called *bleaching liquor*, contains both chlorine and lime. This compound is extensively used as a bleaching material. Its power for this purpose, and consequently its commercial value, may be estimated by its action upon a solution of indigo of known strength (*Ann. of Phil.* xxiv. 218). The composition of bleaching-powder is variously stated. "A specimen of chloride of lime of the best quality usually sold in London, consisted of 1 equivalent of chlorine, 2 of lime, and 2 of water" (*Brande's Chemistry*). Chloride of lime is also used for fumigation, from its possessing the property, when exposed to air, of checking contagion or destroying noxious effluvia.

CHLORIDES OF POTASH AND SODA.—These compounds likewise possess bleaching properties, but the price of the alkalis has led to their being superseded for general purposes by the chloride of lime, though they are still used by some bleachers and calico-printers for their more delicate processes. The chloride of soda is also employed as a substitute for ashes in various manufactures.

CHLORINE, the most energetic of the chemical elements, is obtained by the action of muriatic acid on peroxide of manganese. When pure, it is a greenish-yellow coloured gas, which has an astringent taste, a peculiar, disagreeable odour, and violently irritates the nostrils, windpipe, and lungs, when inhaled. The solution, which is made by transmitting a current of chlorine gas through cold water, has the colour, taste, and most of the other properties of the gas itself. Of these, the most important is its bleaching power; it is also a powerful antiseptic, and destroyer of contagious matter and of bad odours; and hence forms an important ingredient in many useful substances.

CHOCOLATE (Fr. *Chocolat*. Ger. *Schokolate*. It. *Cioccolata*. Por. & Sp. *Chocolate*), a kind of paste or cake, chiefly prepared with the triturated cocoa-nut (*Theobroma cacao*) after having been roasted, and other ingredients, the chief of which are sugar, vanilla, and a little cinnamon. It abounds with nutritive matter, but contains an oil which is of difficult digestion. A small quantity only is used in this country, which is nearly all of British manufacture. Foreigners generally prefer the Spanish chocolate, but ours is made with more care, and is less oily.

CHOSE IN ACTION, an English law term, denoting that kind of property of which the owner is not in the actual occupation, though he has a legal right entitling him to obtain the possession by a suit.

CHROMIUM, a metal resembling iron in colour, brittle, and difficult of fusion. Sp. gr. 5·9. It is rarely to be found in its metallic state, but several of its compounds are used in the arts. In commerce, it chiefly occurs in the forms of chromate of iron and chromate of lead.

CHROMATE OF IRON, a compound of oxide of chrome with protoxide of iron, is found in Unst in Shetland, in France, and near Baltimore in America. It occurs massive, and in octahedral crystals of a blackish colour, and imperfect metallic lustre. Sp. gr. 4·3. It is used in the manufacture of chromate of potash.

Chromate of Lead, or *Red Lead*, is found native in the gold mines of Berezof in Siberia, in the Ural Mountains, and in Brazil, and is easily prepared by mixing chromate of potash with a soluble salt of lead. It occurs massive and crystallized; colour deep orange-red; when pulverized, orange-yellow. Sp. gr. 6. It is a valuable pigment, and is used both in oil and water colours, in calico-printing, and in dyeing.

Chromate of Potash is a salt of a bitter disagreeable taste; crystals yellow. Sp. gr. 2·6. The *Bi-chromate of potash* is prepared from the chromate; it has a bitter penetrating metallic taste. Sp. gr. 1·98. This salt is largely manufactured in Glasgow, for the use of calico-printers.

The other compounds chiefly in use are the *Oxide of Chromium*, employed to give a green colour to glass and to porcelain, and *Chromic Acid*, which, from its property of destroying most vegetable and animal colouring matters, is advantageously employed in calico-printing.

CHRONOMETER. [Watch.]

CHRYSOBERYL, a gem much prized when transparent and free from flaws. Its colour is green, sometimes with a yellow or brownish tinge, and occasionally presenting internally an opalescent blueish-white light. It occurs crystallized, and in rolled fragments. Sp. gr. 3·7. Localities, Connecticut, Ceylon, and Brazil from whence the finest specimens are procured. (*Phillips.*)

CHRYSOLITE, an ornamental stone of a bright yellow colour, sometimes tinged with green or brown; transparent or translucent; and possessing double the power of refraction. It is found in angular, or somewhat rounded crystalline masses, and in prismatic crystals. Sp. gr. 3·4. The best specimens are brought from Egypt.

CHRYSOPRASE is a rare pale-green calcedony, found in Upper Silesia and Vermont, which owes its colour to the presence of nickel. It loses the delicacy of its original hue by being much handled or worn as an ornament: it is, however, much prized by jewellers, and usually cut into a convex form.

CHUNAM, in oriental commerce, is quicklime made from calcined shells.

CIDER (Fr. *Cidre.* Ger. *Zider*, *Apfelwein*), the wine of the apple, is made in large quantities in the English "cider counties," which lie something in the form of a horse-shoe around the Bristol Channel. The best are Worcester and Hereford on the N., and Somerset and Devon on the S. In Ireland, it is made of good quality in the counties of Waterford and Cork. Generally speaking, those apples that are considerably astringent, and are unfit for the table or culinary purposes, make the best cider. From 24 to 30 bushels of fruit are required to make a hogshead, the price of which varies from £2 to £5, according to season and quality. The harvest is in September, but the liquor is not fit for sale until March; it improves by keeping. Cider is made in Germany, Belgium, and Normandy; and in the United States it may be considered as the common beverage of the great body of the people, except in large towns.

An annual license to retail cider in England is granted by the Excise, on an application similar to that required for a beer license [Beer], the payment being £3, 3s., if the liquor is to be drunk on the premises; £1, 1s., if it is not (4 & 5 Wm. IV. c. 85, and 3 & 4 Vict. c. 61). The duty of 10s. a-barrel on cider was repealed in 1830.

CINCHONA. [Peruvian Bark.]

CINNABAR (Fr. *Cinnabre.* Ger. *Zinnober.* Sp. *Cinabrio.* It. *Cinabro*), a mineral ore, consisting of mercury combined with sulphur, from which quicksilver is generally obtained by distillation. A similar compound, prepared artificially and powdered, forms the pigment termed Vermilion.

CINNAMON (Du. *Kaneel.* Fr. *Cannelle.* Ger. *Zimmet*, *Kanehl.* It. *Canella.* Sp. *Canela.* Por. *Canella*), a valuable aromatic bark obtained from a small tree, a species of *Cinnamomum*, found in Ceylon. The tree is seldom peeled before the ninth year, and the proper time is from May to October. After the bark is removed, it is firmly bound up for about 24 hours, during which time it undergoes a kind of fermentation, which facilitates the separation of the outer bark from the epidermis and green matter under it, which are carefully scraped off the Ceylon cinnamon. The substance then speedily dries, contracts, and assumes a quilled or pipe appearance. These pieces or quills are inserted into each other, the smaller being surrounded by larger ones. It is then carefully examined, sorted, put up into bundles, and wrapped in double cloths made of hemp. The interstices between the bales are filled with black pepper, a mode of packing originally practised by the Dutch, and scrupulously adhered to by the English, as it is said to improve both spices. The best Ceylon cinnamon occurs in pieces about 40 inches long, each containing from six to eight quills or rolls. It is of a light yellow colour, nearly as thin as paper, smooth, shining, admits of a considerable degree of bending before it breaks, fracture splintery, has a pleasant warm aromatic flavour, slightly astringent, with a mild degree of sweetness. When chewed, the pieces become soft, and seem to melt in the mouth. Other varieties of cinnamon found in trade are coarser and thicker, and are not so pungent and sweet. The ordinary uses of cinnamon as a spice for seasoning, are well known. It is, besides, an article of the materia medica, but is chiefly employed as an accompaniment to other medicines.

Cinnamon and cassia differ from each other in little except the degree in which the aromatic principle exists in them. There are many contradictory statements as to the species of *Cinnamomum* from which they are obtained. According to the most recent authorities, cinnamon is obtained from two distinct species, but it is altogether uncertain which out of several yields cassia. The best cinnamon is procured from the *C. Zeylanicum* (Blume) indigenous only to Ceylon, but cultivated in Java, Brazil, Guiana, and elsewhere; and that of China is said to be the produce of the *C. Aromaticum* of Nees Von Esenbeck.

Cinnamon is often adulterated with cassia or cassia-lignea, but the latter may be easily distinguished by its fracture being smooth, and by its slimy mucilaginous taste, without any of the roughness of true cinnamon. It is also sometimes mixed with portions which have been deprived of their essential oil,—a fraud which can only be distinguished by the weaker smell and taste.

Europe is supplied with this article almost wholly from Ceylon, of which it forms a staple export. It was formerly the subject of a monopoly, but though this is abolished, it is still liable to the excessive export duty of 3s. per lb., levied by the local government. As cassia lignea, however, can now, since the opening of the China trade, be obtained at Canton for about 3d. per lb., this cheap commodity is substituting itself, for many purposes, for the superior cinnamon of Ceylon. The amount of the latter annually imported averages about 500,000 lbs. The annual consumption in this country at present is, however, only about 16,000 lbs. The surplus imported is re-exported chiefly to Germany, Holland, Belgium, France, Spain, Italy, West Indies, United States, and Mexico.

In the London market four qualities of cinnamon are distinguished, the price of which in bond varies at present (Jan. 1841) from 3s. 3d. to 7s. 9d. per lb.

A bale of cinnamon weighs 92½ lbs. avoirdupois.

Cinnamon-Oil, one of the most powerful stimulants in the materia medica, is generally prepared from the coarsest part of the bark, by maceration in sea-water, and then distilling with a slow fire. The finest has the flavour of cinnamon, and the inferior a considerable mixture of the clove taste. It is sometimes adulterated with the oils of cassia, cherry laurel, or bitter almonds.

CINNAMON-STONE, a precious stone of a red colour, with occasionally a brown or orange-yellow tinge; translucent, rarely transparent, lustre resinous. Sp. gr. 3·5. It is commonly found in masses, which are full of fissures, and rarely in a state fit for cutting. Chief localities, Ceylon and Brazil.

CINQUE PORTS, a Norman term applied to the towns of Sandwich, Dover, Hythe, Romney, and Hastings, which were severed by William I. from the administration of the counties to which they belonged, and erected into a kind of palatine jurisdiction, with the view of securing his communications with the Continent, and rendering this maritime line one of the grand outworks of the Conquest. They were invested with valuable privileges, and placed under the constable of Dover Castle, with the title of Lord Warden of the Cinque Ports. To the five original ports were afterwards added, Winchelsea and Rye, and twenty-one subordinate ports or members,—the jurisdiction of the whole collectively extending from Birchington, near Margate, in Kent, to Seaford in Sussex. The organization of the Cinque Ports was almost entirely broken up by the Parliamentary and Municipal Reform Acts; but the warden still possesses an admiralty jurisdiction, with the execution of writs and custody of debtors.

CIRCULATING MEDIUM, a term applied to "all instruments of interchange by which the productions and the revenues of the country are distributed; every thing which serves and is received as a mode of payment, or which constitutes the nominal money-price which appears in price-currents." (*Mr Tooke's Evidence, Par. Report on Banks of Issue*, 1840; Q. 3285.)

Circulation is the amount of such currency in use. When the term is used in reference to a bank, it means the amount of its paper issues.

CITRIC ACID is obtained by a chemical process from lemon or lime juice. It forms beautiful crystals, of which the primary figure is a right rhombic prism. They have a sour taste, and are soluble in somewhat less than their own weight of cold and half their weight of boiling water. They also dissolve in alcohol. The average proportion of citric acid afforded by a gallon of good lemon juice is about 8 oz. This acid is prepared by a few manufacturers upon an extensive scale. It is employed by calico printers; while in the form of lime juice it is used as an acidulous drink, and in preventing scurvy. With salifiable bases it forms salts called *citrates*, which are applied to various purposes. (*Brande's Chemistry.*)

CITRON (Fr. *Citronat verd.* Ger. *Succade.* It. *Confetti di cedro.* Sp. *Acitron verde*), the fruit of the *Citrus medica*, a tree growing in Madeira, Spain, Italy, Persia, and other places. The fruit is oblong, five or six inches in length, warted and furrowed with a rough yellow rind, and a subacid but edible pulp. It is chiefly valued, however, for the fragrance of the rind, from which a delicate sweetmeat is prepared. There are a great variety of citrons. The *fingered citrons* are a large kind, much esteemed by the Chinese, who place them upon porcelain dishes, and have them in their apartments to fill the air with fragrance. Another variety is in great demand by the Jews, who use it as a conserve at their Feast of Tabernacles. Citrons are generally imported in salt and water, and sometimes preserved with sugar.

CIVET, a valuable perfume obtained from the civet cat (*Viverra civetta*), a native of Brazil, Guinea, Madagascar, and the East Indies; but of which numbers are kept for commercial purposes in Holland. This perfume is produced by both sexes, and is contained in two cavities or pockets placed beneath the tail; these cavities are smooth internally, and covered with numerous small pores, connected with the glands from which it is secreted. It is of a clear yellowish or brownish colour, about the consistence of honey, and uniform throughout. Undiluted, the smell is offensively strong, but when mixed with other substances, it becomes what some consider a fragrant perfume. Civet was formerly in high repute in Europe, but is at present little used, excepting in the composition of some kinds of perfumery, to increase the power of other scents. When genuine it is worth from 30s. to 40s. an ounce.

CLAFTER, a name given to the fathom in Germany and Switzerland.

CLARET, a name given in this country to the red wine of Medoc, imported from Bordeaux, or more commonly a mixture of that and the wine of Benicarlo, in Spain, or some full-bodied French wine. In France, *Clairet* is a general name for all rose-coloured wines. [WINE.]

CLEARING A SHIP is registering her name and cargo, on leaving a port, in the books of the customhouse.

CLEARING-HOUSE. [BANK.]

CLOCK (Fr. *Horloge.* Ger. *Wanduhr*, *Uhr*, *Grosse-Uhr*), a timepiece constructed on the same general principles as the watch, but having its motion regulated by a pendulum, instead of a balance and spring. The early history of clocks is enveloped in obscurity; but the invention of the pendulum clock is supposed to have occurred about twenty years after the discovery of the isochronal property of the pendulum by Galileo in 1639. Many of the most important improvements on the machinery of the clock have been the work of Englishmen; of these may be mentioned the anchor escapement of Clement, a London clockmaker, in 1680, Harrison's pendulum, and Graham's dead-beat escapement. The chief seat of the clock manufacture of the United Kingdom is London. As in the case of watches, the different parts of the mechanism of the clock are made by different sets of workmen, and polished and adjusted by others. The foreign clocks imported into the United Kingdom consist chiefly of German or Nuremberg wooden clocks. [WATCHES.]

Clockmakers are bound to engrave upon the dial-plate their name and residence.

The importation and exportation of clocks and watches are regulated by the act 3 & 4 Wm. IV. c. 52, §§ 58 & 104. [CUSTOMS.]

Clocks and watches for *private use*, however, not being marked in the manner required by the said act, may be admitted on payment of the proper duty, upon the party making a declaration of his entire ignorance of the law at the time he purchased the clocks and watches, and that they are for his own private use. (*T. O. September* 4, 1838.)

CLOFF, the name given to a small commercial allowance or deduction (commonly 2 lbs. per bale), made from the original weight of some kinds of commodities on their sale. It is now nearly obsolete.

CLOVER-SEED (Du. *Klaver-zaad.* Fr. *Semence de trèfle.* Ger. *Kleesaat*), the produce of a plant (*Trifolium*) of which there are two principal kinds: *red clover*, a biennial; and *white* or *Dutch clover*, a perennial. Red and white clover seeds are largely imported from Germany, Holland, Belgium, France, and the United States; and about 100,000 cwts. are annually entered for home consumption. As the foreign seed frequently contains weeds, its quality should be examined by pressing the moistened thumb to the sample, and looking to the colour and plumpness of the seeds which are turned up.

An acre of clover will, on good land, produce about three tons and a half of dry hay; of which two tons will be procured from the first cutting, and one and a half from the second; on highly manured land, greater crops are obtained.

CLOVES (Du. *Kruidnagelen.* Fr. *Clous de girofle.* Ger. *Gewürznelken.* It. *Garofani.* Por. *Cravos da India.* Sp. *Clavillos.* Rus. *Gwosdika*), the unexpanded dried flowers of the clove-tree (*Caryophyllus aromaticus*), a native of the Moluccas. They have somewhat the form of a nail. Their colour should be of a deep pitch-brown, internally reddish; their smell strong, peculiar, and agreeable; and their taste warm, acrid, and aromatic. The best are large, heavy, brittle, but not crumbly, and when pressed, exude a little oil. When light, soft, wrinkled, dirty, pale, and without smell or taste, they are to be rejected, having probably been steeped in water before being dried (*Duncan's Dispensatory*). Europe was for a long time supplied exclusively from Amboyna, where the cultivation of the spice is monopolized by the Dutch; but the clove-tree has now been carried to most of the tropical parts of the world, and particularly to Sumatra, and the western parts of the Indian Archipelago, to Guiana and Brazil. It is also cultivated in Mauritius; but the cloves are of inferior quality. Those of Amboyna are reckoned the best. The average quantity of this spice entered for home consumption is about 100,000 lbs.

CLOVE-OIL. Cloves yield by distillation nearly one-sixth of their weight of essential oil, of a deep red colour, having the flavour of the clove, but comparatively milder. Sp. gr. 1·034. It is a powerful stimulant.

COACH, CARRIAGE. The coachmaking trade is carried on principally in London and Edinburgh, and to a considerable extent also in most large towns throughout the kingdom. The number of persons employed in this manufacture is estimated at about 6000. Besides making coaches for sale, a number of manufacturers are partially engaged in the stage-coach business, by lending out vehicles to speculators, and keeping them in repair, in return for about 2½d. or 3d. for every mile travelled. A few are exported to India and other places; but almost none are imported,—a circumstance attributable partly to the state of excellence to which the manufacture has arrived in this country, and partly to the high import duty on foreign carriages.

Mail Coaches are under the management of the Post-office. *Hackney Coaches* are subject to special regulations in different districts: the hackney and stage carriages of London are regulated by the acts 1 & 2 Wm. IV. c. 22, and 1 & 2 Vict. c. 79; the first of which imposes a license-duty of £5 to keep and let to hire any hackney carriage, besides 10s. weekly during the continuance thereof.

Stage Carriages, or all carriages where separate fares shall be paid by passengers for places therein, are subject in Britain to the following duties and regulations, in terms of 2 & 3 Wm. IV. c. 120; 3 & 4 Wm. IV. c. 48; and 2 & 3 Vict. c. 66:—

	£	s.	d.
For every original license to be taken out yearly by the person who shall keep any stage carriage, namely, for each carriage	5	0	0
And for every supplementary license for the same carriage, for which any such original license shall have been granted, which shall be taken out in any of the several cases provided for by the act during the period for which such original license was granted	0	1	0

And in respect of every mile which any such stage carriage shall be licensed to travel, the following rates of duty per mile, namely,—If licensed to carry not more than 6 passengers, 1d. per mile; more than 6, and not more than 10, 1½d. per mile; and for each 3 additional passengers, ½d. per mile.

The proprietors of railways in Britain shall pay for all passengers conveyed by hire in carriages at the rate of ½d. per mile for every four passengers so conveyed; and they are required to give security that they shall keep regular accounts of the same, and pay the duties. The Treasury is, however, authorized to compound for these duties.

Duties shall attach on every horse let for hire, or used either as a saddle-horse, or for drawing any carriage, and in respect of every horse of any mourning coach or hearse, except for drawing any stage carriage or hackney carriage, going no less than ten miles from the Post-office, nor any fish cart.

Stage carriages, the roof of which shall not be more than 8 feet 9 inches from the ground, and the bearing of which on the ground shall not be less than 4½ feet from the centre of the track of the right wheel to the centre of the track of the left wheel, if licensed to carry not more than 9 passengers, shall be allowed to carry not more than 5 outside; 10 to 12 ditto, 8 outside; 13 to 15 ditto, 11 outside; 16 to 18 ditto, 12 outside; and if licensed to carry any greater number than 18, shall be allowed to carry not more than 2 additional passengers outside for every 3 additional passengers licensed to carry, under penalty of £5. Driver, guard, and children in lap, not to be counted as passengers; 2 children under 7 years to be reckoned as 1 passenger. No person to sit on luggage on roof, nor more than 1 beside the driver; penalty £5. Justices, road-surveyors, toll-keepers, &c. are authorized to cause carriages and luggage to be measured, and passengers counted.

The other regulations have reference chiefly to the name-plates of the proprietors, and the conduct of the driver and guard.

ASSESSED TAXES ON CARRIAGES.

Carriages with four wheels or more.

PRIVATE CARRIAGES.											
No.	Each Carriage.			No.	Each Carriage.			No.	Each Carriage.		
	£	s.	d.		£	s.	d.		£	s.	d.
1	6	0	0	4	7	10	0	7	8	10	0
2	6	10	0	5	7	17	6	8	8	16	0
3	7	0	0	6	8	4	0	9	9	1	6

And so on at the same rate for any number of such carriages.

	£	s.	d.
For every additional body used in the same carriage	3	3	0
Carriages kept to be let for hire with post horses, each	3	0	0
If drawn by one horse, each	4	10	0
Carriages let by coachmakers without horses, each	6	0	0
Carriages with two wheels.			
Each carriage for private use	3	5	0
Ditto kept for hire with post horses	3	0	0
Ditto drawn by two or more horses or mules	4	10	0
For every additional body used in the same carriage	1	11	6
Reduced Duties by 1st Wm. IV. c. 35.			
Four-wheel carriages with each wheel of less diameter than 30 inches, drawn by ponies or mules above 12 hands and not above 13 hands in height, each	3	5	0
Carriages used by common carriers, and occasionally carrying passengers, with 4 wheels	2	10	0
Ditto, with 2 wheels	1	5	0

Exemptions.—Carriages with less than 4 wheels, not kept for hire or profit (except for the conveyance of prisoners or paupers), and drawn by one horse, mare, or gelding, or mule only, and not otherwise, whatever may be the form or construction of such carriage, or the materials with which the same shall be built or fitted up; provided that the price or value of such carriage, together with the cushion or cushions, and every or any other article or thing used therewith, or belonging thereto, shall not exceed, or at any time have exceeded, the sum of £21; but every such carriage must have the name, place of abode, and occupation of the owner, painted in straight lines, in white upon a black ground, or in black upon a white ground, upon the back part of the body of such carriage, or if there be no back part, then upon the panel of the right or off side; or if there be no such panel, then upon some other conspicuous part of such side; or if there be no such side, then upon the outer part of the right or off side shaft, in Roman characters, in words at length, each letter being one inch in height, and of a proportionate breadth, and in such plain and conspicuous manner that the same shall be at all times visible and legible, all in terms of 6 & 7 Wm. IV. c. 65, and 1 Vict. c. 61.

Carriages not let for hire, with less than four wheels of a diameter under 30 inches, where the same shall be drawn by ponies or mules not exceeding 12 hands high.

N.B.—By act 3 Vict. c. 17, an additional duty of 2s. per pound is payable on all assessments commencing 25th May 1840, or any subsequent year, except on "Carriages kept to be let for hire."

Coaches were introduced into England about 1570, and by the year 1600 were in general use among the wealthy classes. Prior to their introduction, the only mode of travelling by land was on foot, on horseback, or in litters,—the use of the last, however, being confined to the sick, to ladies of rank, or to the carriage of the dead. "When the daughter of Henry VII. repaired to Scotland in 1503, she travelled for the most part on a 'faire palfrey,' two footmen in her train, carrying 'one varey riche litere, borne by two faire coursers varey nobly drest; in the wich litere the sayd quene was borne *in the intryng of the good townes* or otherways to her good playsur.' At Dalkeith she was met by her future spouse, James IV.; and the royal lovers made their entry into the capital, 'the kyng monted upon a pallefroy, *wyth the quene behynd hym;* and so rode thorow Edenborough'" (*New Edinburgh Almanac*, 1830). Hired coaches were first used in 1625; but mail coaches were not introduced until 1785. In 1837 there were 54 four-horse, and 49 pair-horse mail coaches in England. The greatest speed attained by any of these was 10¾ miles per hour, the average of the whole being 8¾ miles per hour. There were besides 30 four-horse mails, and 5 pair-horse mails in Ireland; and 10 four-horse mails, and 4 pair-horse mails in Scotland. The number of licensed stage-coaches, including mails, in 1837, was 3026; of which about one-half (1507) began or ended their journeys in London. The amount of revenue derived in 1837 from carriages of all kinds (exclusive of that from horses) was £546,236.

COAL (Dan. *Steenkull.* Du. *Steenkoolen.* Fr. *Charbon de terre.* Ger. *Steinkohlen.* It. *Carboni fossili.* Por. *Carvoes de terra.* Rus. *Ugolj.* Sp. *Carbones de tierra.* Sw. *Stenkol*) is the result of the mineralization of vegetable remains. It exists in many parts of the world, but in none is it produced so abundantly as in Britain. The most important English coal-fields are situated in Northumberland and Durham; but coal is likewise found in large quantities in Wales, Yorkshire, Lancashire, Cumberland, Gloucester, Somerset, and in the midland counties. The Scottish coal-fields are chiefly situated in the Edinburgh and Glasgow districts, in Fife and in Clackmannan. In Ireland coal is worked in the counties of Antrim, Leitrim, and Kilkenny; but the produce of that part of the United Kingdom is not equal to the consumption.

Coal is of different kinds; as, *brown coal*, found at Bovey in Devonshire, and in several parts of the Continent; *pitch coal* or *jet*; *glance* or *anthracite coal*, of which Kilkenny coal appears to be a variety; and *black* or *common coal*:—the last being the kind principally found in this country. Dr Thomson has arranged the different kinds of coal which are met with in Britain into four subdivisions (*An. of Phil.* vol. xiv.). The first is *caking coal*, because its particles are softened by heat, and adhere together, forming a compact mass: the coal found at Newcastle, around Manchester, and in many other parts of England, is of this kind. The second is termed *splint coal*, from the splintery appearance of its fracture. The *cherry coal* occurs in Staffordshire, and in the neighbourhood of Glasgow: its structure is slaty, and it is more easily broken than splint coal, which is much harder; it easily takes fire, and is consumed rapidly, burning with a clear yellow flame. The fourth is *cannel coal*, which is found of great purity at Wigan in Lancashire; in Scotland it is called *parrot coal*: it emits a brilliant light, possesses a very compact structure, and is peculiarly well fitted for the manufacture of gas. Coal is of a great variety of qualities, as almost every pit has in trade a distinct character.

The employment of this mineral in England as fuel extends little farther back than six centuries; and it was not until about the reign of Charles I. that it was in general use in London and other large towns. Its consumption has since kept pace with the increase of population and industry, and with the advances in the art of mining. The invention of the steam-engine, the improved mode of propping the mines introduced in 1810, and the advantages derived from the safety-lamp of Davy (first used in 1815), have greatly facilitated the working of coal in modern times; and since the commencement of the present century, its consumption has been more than doubled. At present the annual consumption of the United Kingdom is estimated at 30,000,000 tons, which, at the rate of 7s. per ton, will amount to £10,500,000,—a sum considerably exceeding the value of the annual produce of gold and silver throughout the world.

The following table exhibits the quantities shipped coastways, and exported to foreign countries at the different ports in 1839:—

	Coastways.	Exported.		Coastways.	Exported.
ENGLAND.	Tons.	Tons.		Tons.	Tons.
London	....	26,640	SCOTLAND.		
Portsmouth	2,940	230	Leith	30,459	18,366
Bristol	3,710	6,874	Borrowstounness	126,183	33,029
Gloucester	74,786	3,058	Grangemouth	69,383	11,151
Cardiff	145,057	4,879	Kirkcaldy	46,960	7,138
Newport	470,820	13,035	Greenock	1,389	16,011
Swansea	486,792	25,684	Port-Glasgow	18	3,768
Llanelly	141,839	24,890	Glasgow	101,038	20,733
Milford	63,221	....	Irvine	248,417	19,224
Chester	88,111	3,921	Ayr	73,457	151
Liverpool	....	103,630	Other ports	2,044	994
Fleetwood	22,686	107			
Whitehaven	439,188	22,616		699,348	130,565
Carlisle	50,141	2,432			
Berwick	1,269	1,372			
Newcastle	2,159,321	558,052	IRELAND.		
Sunderland	913,960	370,620			
Stockton	1,308,778	111,707	Dublin	225	1,329
Hull	13,285	28,426	Other ports	1,863	2,386
Goole	132,475	4,802			
Other ports	3,908	2,162		2,088	3,715
	6,521,577	1,315,137	Totals....	7,223,013	1,449,417

Of the 7,223,013 tons shipped coastways, 336,968 tons consisted of culm, which was sent almost wholly from Swansea, Llanelly, and Milford, and 13,015 tons of cinders, chiefly from Newcastle. All coal sent coastways by sea was, in the reign of Wm. III., subjected to a tax of 5s. per chaldron, which, during the late war, was raised to 9s. 4d.; it was reduced in 1824 to 6s., and in 1831 it was repealed; in 1830 the revenue yielded by this tax amounted to £1,021,862.

In 1836 an act (6 & 7 Wm. IV. c. 109) was passed which repealed certain provisions contained in three previous acts (9 Anne, c. 28; 4 Geo. II. c. 30; and 28 Geo. III. c. 53), by which combinations in the coal-trade to enhance the price were declared unlawful, and which also had the effect of preventing more than five persons from carrying on trade in coals in partnership.

The coal-trade in different parts of the kingdom is regulated by a great variety of local statutes; the shipments from the Tyne by the "Turn act," 6 Geo. IV. c. 32, which provides that every ship must be loaded in her "turn;" and the London trade by the act 1 & 2 Wm. IV. c. 76, as renewed (1 & 2 Vict. c. 101) for 7 years in 1838. The chief provisions of the latter are the following :—

The duties previously payable upon coals commuted for 13d. upon every ton sold within the limits of the city; namely, 8d. per ton payable to the fund for public improvements; 4d. per ton to the corporation of London; and 1d. per ton to the coal market. Coal Exchange to continue vested in the corporation of London; and to be an open market, §§ 3, 4. Court of Aldermen may make by-laws to regulate the market, § 32. Coals to be sold by weight; and the chaldron measure formerly used to be reckoned equal 25½ cwts., §§ 43, 44. With coals exceeding 560 lbs. delivered from any lighter, or from any wharf within 25 miles of the General Post Office, the seller shall deliver to the purchaser immediately on arrival, and before unloading, a ticket specifying the name of the coal, and the quantity; and a weighing machine is directed to be carried with every wagon, and the carman to weigh gratuitously any sack chosen by the purchaser, under penalties of £20, § 47. Coals above 560 lbs. to be delivered in sacks containing either 112 lbs. or 224 lbs. net; coals delivered by gang labour may be conveyed in sacks containing any weight, such being first mentioned, and may be delivered in bulk if the purchasers think fit; but the weight of the cart and coals therein shall be previously ascertained by a weighing machine, and the seller's ticket shall state the weight of the cart and of the coals therein, under penalty of £50.

The consumption of coal in London in the year 1837 amounted to 2,626,997 tons, which, with the exception of 18,735 tons Scotch, 33,259 tons Welsh, and 14,963 tons Yorkshire, were brought almost wholly from Newcastle, Sunderland, and Stockton; the number of vessels which entered the port of London with coals in the same year was 8720. In 1838, the consumption of London was 2,552,321 tons, and in 1839, 2,611,616 tons.

Of late years considerable interest has been excited both in and out of Parliament by a system under which the supply of coals to the London market is limited when the prices are below certain defined rates. It would appear, that for the ostensible object of preventing an undue fluctuation of prices, an arrangement, called "The Limitation of the Vends," has (though subject to occasional interruptions) long existed among the coal-owners in Durham and Northumberland, by which the quantity to be raised from the different collieries is apportioned according to the probable demand. "When," says Mr Brandling, "it is understood by the coal-owners that all the parties interested in the coal-trade on the Tyne and Wear are willing to enter into an arrangement of this nature, a representative is named for each of the collieries; these representatives meet together, and from amongst them choose a committee of nine for the Tyne, and seven for the Wear. This being done, the proprietors of the best coals are called upon to name the price at which they intend to sell their coals for the succeeding twelve months; according to this price the remaining proprietors fix their prices; this being accomplished, each colliery is requested to send in a statement of the different sorts of coal they raise, and the powers of the colliery, that is, the quantity that each particular colliery could raise at full work; and upon these statements the committee, assuming an imaginary basis, fix the relative proportions as to quantity between all the collieries, which proportions are observed whatever quantity the markets may demand. The committee then meet once a-month, and according to the probable demand of the ensuing month, they issue so much per 1000 to the different collieries; that is, if they give me an imaginary basis of 30,000, and my neighbour 20,000, according to the quality of our coals, and our power of raising them in the monthly quantity, if they issue 100 to the 1000, I raise and sell 3000 during the month, and my neighbour 2000; but in fixing the relative quantities, if we take 800,000 chaldrons as the probable demand of the different markets for the year, if the markets should require more, an increased quantity would be given out monthly, so as to raise the annual quantity to meet the demand, were it double the original quantity assumed." (*Par. Paper*, 1830.)*

The criterion by which the coal-owners are guided is the price in the London market. This price, however, is alleged to be very much under the control of the coal-factors, who, it is said, are enabled, by the co-operation of the northern owners, to regulate the number of cargoes to be unloaded, and in this way artificially to elevate the price to the consumer. The regulation of the coal-factors of date 2d February 1837 bears, "That in consequence of the great increase of price of every thing connected with shipping and the coal-trade, the following scale be adopted," namely, to admit from 30th September to 1st March, 40 cargoes, when coals rule 23s. 6d.; 50 cargoes when they rule from 23s. 9d. to 24s.; 60 cargoes when from 24s. 3d. to 24s. 6d.; and 70 cargoes at 24s. 9d. From 1st March to 1st April, each rate is reduced 6d.; and from 1st April to 30th September, a further reduction of 6d. is made on the scale. The price here stated is the wholesale price charged at the coal-exchange.* According to Mr Pease, the particulars of the cost of one ton of best house-fire coal (as Bewicke, Craister, Wall's End, Gosforth, Heaton's, and others of a similar quality), from the Tyne, supplied to a London consumer, assuming the price paid by him to be £1, 12s. 6d., is as follows:—*1st*, Cost on board of a ship in the Tyne, 10s. 6d.; *2d*, Charges at coal-market in London, including city dues, insurance, &c., 2s. 8d.; *3d*, Freight to shipowner, including harbour dues, &c., 9s. 4d.; *4th*, coal-merchant in London, including screening, carting, &c. 10s.; in all, £1, 12s. 6d. (*Par. Paper*, 1838, *No.* 475, pp. 7, 165.)

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* The following are the annual proportions which the committee for regulating the issues have apportioned upon the nominal basis of each colliery in the regulation since its establishment:—In 1834, 645 chaldrons per thousand; in 1835, 768 chaldrons; in 1836, 765 chaldrons; in 1837, 770 chaldrons; in 1838, 695 chaldrons; in 1839, 644 chaldrons; and in 1840, 555 chaldrons per thousand.

Notwithstanding the clamour which has been raised upon this subject, it may be doubted whether any material reduction could be made on the price charged by the northern coal-owner, as he is kept in check by the competition of proprietors in other places, who are not parties to the alleged combination. But the fact that the cost free on board, in the Tyne, is more than trebled upon the consumer in London, shows that abuses must exist in the mode of conducting the trade there; and on examination this will be found to be the case. An unnecessary delay occurs in the discharge of coal-vessels after their arrival in the Thames,—a circumstance which must produce an extra charge for freight; while, in unloading and in all subsequent operations, a want of economy is conspicuous, and charges are accumulated in a manner without parallel in any other port of the kingdom. In Edinburgh, situated on elevated ground, 2 miles from the port, the shipping price of Newcastle coal is only about doubled on the consumer.

The exportation of coals was formerly checked by a heavy export duty of 6s. 5d. per ton upon large, and 1s. 8d. per ton upon small coals; but in 1831 these duties were modified; and in 1835 (4 & 5 Wm. IV. c. 89) they were repealed, with the exception of an *ad valorem* duty of 10s. per cent. when exported in a British ship, and of 4s. per ton when exported in a foreign ship. No duty is exigible on shipments to the British colonies. As coal can be frequently taken as ballast, it is now exported in increasing quantities to foreign countries. In 1839, the quantity exported was, as already stated, 1,449,417 tons; whereof, France, 340,373 tons; Holland, 180,348 tons; Denmark, 129,005 tons; Germany, 116,678 tons; Russia, 78,054 tons; Prussia, 83,942 tons; Italy, 30,279 tons; Malta, 27,988 tons; British America, 50,983 tons; British West Indies, 64,078 tons; United States, 52,930 tons; Brazil, 21,066 tons; other countries, 273,693 tons; the declared value of the whole was £542,609.

It is not now necessary to enter into bond for the due exportation of coals to British possessions; but when they or any other articles shall be exported in foreign vessels, on payment only of the low duty (under treaties of reciprocity), security by bond shall be given (for the amount of duty at risk) for the due landing of the articles so exported in some port of the country to which such vessel shall belong, and for the production, within six months, of certificates by the British consul at such port of the due landing of the cargoes, before such bonds shall be discharged: the parties executing the bond are to be the master and mate of the vessel only, and the stamp-duty on the bond is to be remitted to the party. (*Min. Com. Cus. July* 12, 1837; *Treas. Order, Nov.* 7, 1837, *and Dec.* 22, 1838.)

Duration of Coal.—There is much fallacy in the conjectures which are so frequently hazarded in regard to the duration of our coal-mines. Some persons perceive in them a store of fuel laid up for thousands of years, even at the present increasing rate of consumption; while others pronounce as confidently that cold and starvation await us before five centuries shall have elapsed. The present vast demand, it is true, would exhaust our known coal-fields in a calculable time, but we have the unknown, or rather unsurveyed, in reserve, to which ingenuity and enterprise will gradually extend themselves. We have also ground to hope that the present waste of coal in the mine and on the bank cannot always continue, for in the progress of knowledge we have an assurance, that every year, as it increases the necessity, will also increase the means of economizing our resources. When we consider the augmented effect of coal in the steam-engine since the days of Watt, and the saving of fuel which the introduction of the hot-blast, and of anthracite coal in the smelting of iron, promises to occasion, we cannot doubt that a general rise in the price of coal would stimulate ingenuity to the discovery of other improvements by which equal effects might be produced without increase of cost. Such a stimulus is already in some measure supplied by the economy of fuel which the employment of steam-vessels in long voyages renders necessary, and from this important results must follow. Meantime, the only legitimate end to be aimed at by speculators on the duration of coal, is the prevention of all waste. If, to the best of our power, we husband our resources, we may safely leave to posterity the management of their own interest,—the task of compensating for a diminution of mineral resources by an increase of mechanical skill and ingenuity.

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* Much dissatisfaction exists among the owners of the best coals in the north with the coal-factors' regulation in London, which often precludes the best description of coal from being offered for sale until the inferior qualities have been taken off the market by the coal-merchants, and it is considered as not improbable that some alteration in the present system will be the result.

COASTING-TRADE. [COMMERCE. CUSTOMS. SHIPPING.]

COB, a name given in some places to the hard dollar.

COBALT (Fr. *Cobalt*. Ger. *Kobalt*), a reddish-gray brittle metal, somewhat soft, and difficultly fusible; it possesses little lustre. Sp. gr. 8·6. The finest specimens are the produce of Saxony. Cobalt is never employed in a separate state, but the impure oxides of the metal, called zaffre and smalts, are extensively used as colouring materials. *Cobalt blue*, or *Thenard's blue*, is a beautiful pigment prepared from the phosphate of cobalt, which may sometimes be introduced by painters as a substitute for ultramarine. (*Brande's Chemistry*.)

COCA, a shrub (*Erythroxylon coca*) cultivated extensively on the Andes of Peru, on account of its leaves, which, when dried and mixed with burnt lime, form a stimulating narcotic, which is much used by the Peruvians as a masticatory. The use of coca brings on a state of apathy to all surrounding objects, and its effects are of the most pernicious nature, exceeding even those of opium in the destruction of mental and bodily powers. A confirmed coca-chewer, or *coquero*, is said never to be reclaimed. In Peru and Bolivia, the value of this drug prepared annually is estimated at above 2½ millions of dollars.

COCCULUS INDICUS (Fr. *Coque de Levant*. Ger. *Fischkörner*. It. *Galla di Levante*. Malay, *Tuba bidij*. Tam. *Kakacollie verei*. Sans. *Kakamari*), a name given to the berries of the *Menispermum cocculus* (Linn.) of Malabar. They are about the size of large peas, of a gray colour, and wrinkled surface, and contain a kidney-shaped seed within a very thick shell. Four ounces of the nut afford one ounce of the seeds. The shell has little taste, but the seed is poisonous and intensely bitter. Cocculus indicus is said to be employed by some brewers as a substitute for hops, though its sale and use for such a purpose is prohibited under severe penalties by 56 Geo. III. c. 58. It is sometimes used externally in medicine. About 2000 lbs. are annually entered for home consumption.

COCHIN-CHINA. [ANNAM.]

COCHINEAL (Du. *Conchenilje*. Fr. *Cochenille*. Ger. *Koschenilje*. It. *Cocciniglia*. Por. *Cochenilha*. Rus. *Konssenel*. Sp. *Cochinilla, grana*), a beautiful red dye-stuff, is the female of a small insect (*Coccus cacti*) a native of Mexico, which feeds on the leaves of the *cactus opuntia*, from which it is supposed to derive its colour. After being collected from the plants, they are plunged into boiling water to kill them, and dried in the sun. Cochineal is imported in small rugose inodorous grains, commonly of a deep mulberry-colour, and covered more or less with a whitish down. Those insects are preferred which are dry and plump. In the British market the qualities are distinguished by the names *Black*, *Silver*, and *Foxy*, the respective prices of which, in bond, were recently stated at 8s., 7s., and 6s. per lb. It is liable to be adulterated by mixture with old insects, composed of mere skin, and with spurious grains manufactured of coloured dough; the latter are detected by the action of boiling water, which dissolves them, while it has little effect upon the genuine insect. Care should likewise be taken that the dark colour has not been communicated by art, which may be discovered by the article having, in this case, an unpleasant odour. Cochineal, though affording a crimson solution, is generally used for dyeing scarlet, and is employed chiefly for woollen goods.

The production of cochineal is confined to Mexico and Central America; but, as it comprehends a great value in small bulk, it is frequently used by merchants for remittances, and is thus imported from many other places besides the countries of production. The consumption in this kingdom was nearly doubled after a great diminution of the duty in 1824; and it has again much increased since the late reduction to 1s. per cwt. (1 & 2 Vict. c. 113), which took effect from the 5th January 1839; the average quantity annually entered for home consumption in the four previous years having been 170,000 lbs.; whereas, in the year to 5th January 1840, it amounted to 490,000 lbs.

COCKET, a custom-house warrant, given on the entry of goods for exportation, in evidence of their having paid duty, or being duty free.

COCKLE, a shell-fish (*Cardium*) which abounds in the seas of almost every warm and temperate climate. It is generally found buried in sand near the shore. The species are numerous, and some grow to a very large size. The common cockle (*C. edule*) is well known as a cheap article of food in most of the towns on our coast.

COCO, OR COCOA-NUT (Pers. *Narjible*), is the product of a species of palm (*Cocos nucifera*) found in all tropical countries. The milk of the cocoa-nut is a pleasant refreshing liquor contained within the kernel while it is yet growing, and which diminishes in quantity as the kernel approaches to maturity. This last has much the taste of the filbert. The importance of the cocoa-nut tree to mankind has caused it to be cultivated wherever the climate is favourable to its growth. It is sometimes found throughout extensive tracts, to the exclusion of all other trees. Almost the whole Brazilian coast, from the river San Francisco to the bar of Mamanguape, about 280 miles, is thus occupied; and it was estimated some years ago that about 10,000,000 trees were growing on the south-west coast of Ceylon. The nuts are generally brought to Europe as wedges to fasten casks and other packages in vessels; their freight, therefore, costs nothing. About 400,000 lbs. are annually entered for home consumption.

The cocoa palm is from 60 to 100 feet in height, and 1 to 2 feet in diameter; at the top it is crowned with a magnificent tuft of leaves, each about 14 feet in length, and resembling an enormous feather. A good tree produces from 50 to 80, sometimes 100 nuts in a year; and each nut is considered equivalent, as food, to at least 3 oz. of rice. It grows best in the moist low grounds that border the seacoast, or which form the neighbouring islands. Nothing can be more beautiful than these cocoa groves. The bare trunks rise like columns to a vast height, and the regular foliage, arching their summits, carries the eye along the vistas, as it were, of a boundless gothic edifice. It is a very prolific tree; flowers are put forth every four or five weeks, and thus flowers and fruit are generally to be seen at the same time. It furnishes materials for almost an infinite variety of purposes. Of the roots are constructed baskets; of the hollowed trunk, drums, pipes for aqueducts, and similar articles. The reticulated substance at the base of the leaves, besides serving for infants' cradles, is manufactured into coarse sackcloth. The terminal bud is accounted a delicacy for the table. The leaves are employed for thatching buildings, for making baskets, fences, and torches, besides furnishing the chief diet in Ceylon for the tame elephants; in a young state they are transparent, and are made into lanterns by the natives. The woody ribs of the leaflets are formed into a kind of basket-work for catching fish, and into the brushes and brooms employed for domestic purposes. Good potash is yielded by the ashes, and the latter is used instead of soap by the native washermen. From the unexpanded flower is procured a sweet juice which is converted into wine, and subsequently distilled into arrack, which is manufactured in very large quantities in the island. From palm-juice is likewise prepared, in great abundance, a coarse kind of sugar called *jaggery*. The value of the fruit of this tree can only be fully appreciated in the countries that produce it. The fibrous covering is an admirable substitute for hemp, and is largely manufactured into *coir* [COIR], a substance peculiarly well adapted for the cordage of vessels. In short, to such a variety of purposes is the cocoa-nut tree applied, that, according to Mr Martin, the natives of the Maldive Islands send an annual embassy to Ceylon, the boats conveying which are entirely prepared from this tree, the persons composing the embassy clothed and fed on its products, and the numerous presents for the governor are all manufactured from this queen of the palms.

COCOA-NUT OIL is obtained from the albumen, or white solid matter contained within the shell, by pressure or decoction; usually the former. This oil is used in lamps, in the manufacture of candles and torches, in the composition of pharmaceutical preparations; and mixed with dammer it forms the substance used in India for calking the seams of ships. It is largely imported into the United Kingdom from Ceylon, and about 30,000 cwts. are annually entered for home consumption.

COCOA. [CACAO.]

COCOON, the oblong roundish ball formed by the silk-worm by winding around itself the silk which it draws from its bowels.

COD (Du. *Kabeljaauw, Baukaelja*. Fr. *Morue*. Ger. *Kabljau, Bakalau*. It. *Baccala*. Por. *Bacalhão*. Sp. *Bacalao*), the most valuable of the white fish (*Gadus Morrhua*, Linn.; *Morrhua vulgaris*, Cuv.) is found universally from Iceland nearly to Gibraltar, and is very abundant on the coast and islands on the E. side of America, from N. lat. 40° to 66°, particularly at Newfoundland. It spawns in our seas about February, and nine millions of ova have been found in the roe of one female. It is in the best condition, as food, from the end of October to Christmas. Two varieties are distinguished in the British seas, the northern or Scotch cod, a blunt-headed, lighter-coloured fish; and the southern or Dogger Bank cod, a sharper-nosed, darker fish: both are equally good, and are sometimes taken on the same ground. As cod generally inhabits water from 25 to 40 fathoms deep, its capture is only attempted with lines and hooks. It is voracious, and easily taken; from 400 to 550 fish have been caught at the Newfoundland bank, in 10 or 11 hours, by one man. "In this country, it appears to be taken all round the coast; among the islands to the N. and W. of Scotland it is abundant; most extensive fisheries are carried on; and it may be traced as occurring also on the shore of almost every county in Ireland."—"A change has lately taken place from the cod having shifted their ground. Formerly the Gravesend and Barking fishermen obtained no cod nearer than the Orkneys or the Dogger Bank; but for the last two or three years, the supply for the London market has been obtained by going no farther than the Lincolnshire and Norfolk coasts, and even between that and London, where previously very few fish could be obtained." (*Yarrell's British Fishes.*)

The *Great Bank of Newfoundland*, the celebrated resort for the cod-fishery, is a large rocky shoal extending towards the east of the island, about 600 miles in length and 200 in breadth. The ocean flowing over this vast submarine mountain contains perhaps as much human food as a land territory of equal extent; and although the maritime nations have for several centuries laboured indefatigably in it, not the slightest diminution of fruitfulness has ever been observed. For a long time the fishery was chiefly confined to this bank, and to vessels sailing from European ports. As soon, however, as permanent settlements began to be formed, it was found that the S. E. coast, rocky and deeply embayed, afforded a supply almost equally exhaustless, the produce of which could be cured there much more cheaply and conveniently. The bank-fishery was in consequence gradually deserted by the British; and if the French and Americans still carry it on to a certain extent, we may conclude that it is entirely owing to the want of the same conveniency on shore.

The fishery now carried on by our countrymen chiefly extends along the coasts of Labrador, principally the south-eastern tract opposite to Newfoundland, and separated from it by the Straits of Belleisle. Twenty thousand British subjects are annually employed, with from two to three hundred schooners, on the Labrador stations. About four-fifths of what we prepare is afterwards exported to the southern countries of Europe, chiefly for consumption during Lent, and the other fasts of the Roman Catholic church. A great quantity is carried into Newfoundland *green* or *pickled*, that is, it is split and salted, but has not been dried at the stations. In general, however, it is dried; after undergoing which, and a careful inspection, it is divided into three sorts:—1. Merchantable, of the finest colour and quality. 2. Madeira, which are nearly equal to the first. 3. West India, decidedly inferior, yet capable of standing a sea-voyage, and being kept a considerable time. These last, with the greater part of the Madeira, are destined for the aliment of the negroes in the West Indies. The bank-fish is inferior in appearance to the shore-fish, and, to a certain degree, in quality, from the process of drying (which must be done on shore) being often performed too late, and with fewer conveniences than in the case of the shore-fishery. It is, however, of a larger size, which secures a preference in some markets.

The annual produce of the British fishery of Newfoundland, including the fish carried there from Labrador, at different periods since 1790, was as follows. The quantities stated are quintals of dried fish, each equal 112 lbs., or 1 cwt. avoirdupois.

1790, 1791, 1792, average .	quintals 656,800	1830	quintals 760,177
1798, 1799, 1800 . .	382,881	1832	619,177
1805	526,390	1833	883,536
1815	1,245,808	1834	674,968
1820	899,729	1835	727,586
1825	973,464	1836	860,354

The state of the fishery may thus be regarded as stationary. The price obtained for cod, however, has varied remarkably. In 1814, it was estimated at £2 per quintal; in 1831, 1832, and 1833, at not more than 10s. In 1834, it rose to about 13s.; but in 1835, again fell to 10s. The value of the 860,354 quintals dry fish, in 1836, is stated in the public accounts at £517,457, of which there were exported, 810,598 quintals, value, £483,638 sterling; the value of the core and pickled fish, in the same year, being, besides, £1665. This, however, was exclusive of the fisheries of Nova Scotia, Cape Breton, Canada, and New Brunswick, the produce of which is stated under these heads respectively. The quantity of fish imported into the United Kingdom, re-exported, and consumed, for a series of years, is stated in the accounts of the Board of Trade as follows, without however distinguishing the portion thereof consisting of cod:—

	1834.	1835.	1836.	1837.	1838.
Imported, cwts. . .	51,974	68,337	86,165	125,133	103,448
Re-exported . . .	17,412	5,360	9,916	13,310	6,574
Entered for consumption .	34,562	62,752	76,474	111,823	96,874

Great Britain, by the treaty of 1816, ceded to France the right of fishing on the shores of Newfoundland, from Cape John to Cape Ray, with the islands of St Pierre and Miquelon; and in 1832, this power employed about 325 vessels, of from 100 to 400 tons each, in her fisheries on the British American coasts and banks, and 14,000 fishermen; and the produce of their fishery in the same year was about 354,000 quintals, value £300,000 sterling; to protect which the government pays on the average £50,000 in bounties. The French vessels are principally fitted out at St Malo, Bordeaux, Brest, Marseilles, and Dieppe.

The Americans of the United States, by the convention of 1818, possess the privilege of fishing along all the coasts within three marine miles of the shore; and of curing fish in such harbours and bays as are uninhabited, or, if occupied, with the consent of the inhabitants. Their first spring voyage is made to the banks; the second either to the banks, Gulf of St Lawrence, or the coast of Labrador; the third, or fall voyage, is again to the banks; and a fourth, or second fall voyage, is also made, sometimes to the banks. In these fisheries they have annually engaged from 1500 to 2000 schooners of 90 to 130 tons, employing about 20,000 seamen. The total produce of their cod-fishery was stated some years ago at 1,850,000 quintals, of which about 1,500,000 quintals were taken in the British American seas. The adventurers receive no bounty from their government, but they possess peculiar advantages from their vicinity to the fishing-grounds. Their vessels are chiefly fitted out at Boston, and other ports on their north-eastern coast.

The history of the cod-fishery, and of the dissensions it has frequently produced between the maritime states, with a full account of the different methods by which the fish are caught and cured, will be found in M'Gregor's "British America," vol. i. chap. 9 & 10; also in Edinburgh Cabinet Library, "British America," vol. ii. chap. 12. [Fisheries.]

CODILLA, the part separated or picked out in cleaning hemp or flax.

COFFEE (Du. *Koffy*. It. & Por. *Caffé*. Ger. *Koffe*. Rus. *Kofé*. Fr. & Sp. *Café*) is the berry of the *Coffea Arabica*, an evergreen shrub with an erect slender trunk, in height from 8 to 15 feet, and having long flexible branches. The flower resembles that of the common jasmine, and the fruit is like a small red cherry, enclosing within a soft pulp the two oval seeds familiar to every one as the coffee bean of commerce. The shrub begins to produce fruit when about 2 years old, and yields, according to its age and size, from 1 to 4 or 5 lbs.; but the quality of the produce from young plants is inferior to that from such as are 4 or 5 years old. Coffee only 2 or 3 months from the tree is not so good as that which has been kept a year; but when older it becomes deteriorated. When of good quality, the seeds or beans are hard and heavy, sink quickly in water, are of a light yellowish-green colour, sweetish taste, possess in a slight degree the peculiar odour of coffee, and are free from any damp smell. The beans from the West Indies are larger than those from the East. Before being used for domestic purposes they are roasted, a process by which they are increased to nearly twice their original size, while they lose about one-third of their weight. Coffee is very apt to imbibe moisture, or the flavour of any thing placed near it; much attention is therefore necessary in packing it on board ship or otherwise.

The coffee shrub is indigenous to Abyssinia and Arabia, but it has been transplanted into many tropical countries, and is now of great commercial importance. Its chief celebrity, however, is derived from Arabia, where its cultivation seems to be best understood. The quantity shipped from the different places of its production is at present estimated at upwards of 250,000,000 lbs. The chief places, stated according to their importance in this respect, are Brazil, 72,000,000 lbs.; Cuba, 64,000,000 lbs.; Hayti, 40,000,000 lbs.; Java, 30,000,000 lbs.; British West Indies, Dutch Guiana, South American States, Ceylon, British India, French West Indies, Porto Rico, Sumatra, Bourbon, Philippines, and Mocha.

The consumption of coffee in this country was inconsiderable until of late years. In 1790, it amounted only to 973,110 lbs.; the duty on British plantation coffee being at the same time about 10½d. per lb. An increase of the duty in 1795 to about 1s. 5½d. per lb. reduced the consumption; and in 1800 it was only 826,590 lbs. An impetus, however, was given to the trade in 1807, when the duty was reduced to 7d. per lb.; and in 1810, the quantity entered for home consumption was 5,308,096 lbs. In 1820, it was 6,869,286 lbs. Its subsequent progress is shown in the following table :—

ACCOUNT of the Quantities of Coffee imported, exported, and consumed in the United Kingdom; with the rates of import duty, revenue arising therefrom, and price of fine Jamaica Coffee in bond in July in the following years:—

Years.	Imported.	Exported.	Consumed.	Duty per lb.			Revenue.	Price per Cwt.		
	lbs.	lbs.	lbs.		s.	d.	£	s.		s.
1821..	45,237,869	41,635,956	7,593,001	W. Ind. B. P.	1	0	384,283	119	to	124
1822..	44,003,124	35,825,535	7,669,351	E. Ind. B. P.	1	6	387,342	140	..	156
1823..	45,053,373	30,025,691	8,454,920	Foreign.	2	6	428,613	125	..	128
1824..	50,674,249	39,517,736	8,262,943				420,988	87	..	104
1825..	52,597,518	27,392,389	11,082,970				315,809	88	..	94
1826..	42,017,103	31,894,278	13,203,323				336,570	85	..	88
1827..	47,938,047	29,475,870	15,566,376				399,690	80	..	85
1828..	41,069,731	23,785,960	17,127,633				440,245	68	..	77
1829..	39,071,215	23,023,410	19,476,180	W. Ind. B. P..............	0	6	484,975	73	..	76
1830..	40,952,163	20,087,994	22,691,522	E. Ind. B. P.	0	9	579,363	66	..	78
1831..	43,007,828	22,485,474	22,740,627	Foreign..................	1	3	583,751	79	..	82
1832..	50,225,939	25,719,742	22,952,527				589,858	87	..	89
1833..	34,426,109	15,349,578	22,741,984				591,241	107	..	110
1834..	41,865,111	15,250,480	23,785,095				614,434	70	..	105
1835..	28,398,493	13,346,537	23,295,046				652,124	96	..	126
1836..	34,054,837	10,681,758	24,947,690	W. & E. Ind. B. P. pro-			691,616	83	..	110
1837..	36,412,514	8,060,975	26,346,961	duce of & import. from	0	6	696,645	103	..	124
1838..	39,932,279	11,293,290	25,765,673	E. Ind. B. P. imp. from	0	9	685,082	90	..	129
1839..	39,850,752	12,762,587	26,832,268	E. Ind. imp. from	1	0	779,855	124	..	158
1840..				Foreign.	1	3		121	..	150

Of the 39,932,279 lbs. imported in 1838, there were brought from the British West Indies 17,588,655 lbs.; East India Company's territories and Ceylon, 7,785,963 lbs.; Brazil, 10,373,713 lbs.; Hayti, 1,655,494 lbs.; Cuba and other Foreign West India colonies, 685,509 lbs.; Cape of Good Hope, 506,874 lbs.; West Coast of Africa, 267,303 lbs.; Colombia, 375,329 lbs.; the remainder in smaller quantities from Mauritius and other places. The chief exportations in the same year were to Belgium, 2,586,500 lbs.; Holland, 2,049,220 lbs.; Italy and Sicily, 2,308,822 lbs.; Turkey, 1,546,695 lbs.; Russia, 669,305 lbs.; Germany, 532,434 lbs.; Malta, 177,413 lbs.; and Syria, 128,158 lbs. It may be noticed, however, that besides the quantities of coffee entered as imported into the United Kingdom, numerous cargoes from Brazil and other foreign countries are sold in London by sample; the vessels waiting in a roadstead in the Channel until a sale is effected, when they are despatched, without breaking bulk, to Hamburg, Antwerp, Rotterdam, or some other port on the Continent.

The consumption of coffee in the United Kingdom has now overtaken the supply from the British West Indies and other colonies admissible at the low duty of 6d. per lb.; and the great increase of price which has consequently taken place, has, besides rendering adulteration with chicory, roasted rye, and burnt corn, very common, made it an object to import foreign coffee by way of the Cape of Good Hope, which, being held to be a British possession within the limits of the East India Company's charter, entitles such coffee to be introduced into this country for consumption at the next lower duty of 9d. per lb. In this way, great quantities of coffee, the produce of Brazil, Hayti, and other foreign countries, have been entered for home consumption; the additional cost of sending it for transhipment at the Cape being only from ½d. to 1d. per lb. Java coffee is likewise introduced in this way through the Cape and Singapore. These evasions of the law, called in trade "colonizing coffee," have been chiefly practised since the end of 1838, before which time the quantity introduced at the 9d. duty was quite inconsiderable. The 1s. duty is nearly an exclusion; that at 1s. 3d. is entirely so; the coffee imported into this country direct from Brazil, Hayti, and other foreign countries being merely warehoused for re-exportation to the Continent.

The absurd operation of the present regulations, under which the British consumer is made to pay the higher duty, and an increase of freight, while the foreign coffee is not excluded from the British market, though this was obviously the purpose of the law, has already engaged the attention of Parliament (*Report on Import Duties*, 1840), and it is considered probable that another session will not be allowed to pass without some remedy being applied by the legislature. The formation of temperance societies and other circumstances with regard to the habits of the people, are such as to be greatly more favourable than formerly to the use of coffee by the humbler classes, and little doubt is entertained that the revenue derived from it might be much increased by a different arrangement of the duties. The following table, prepared by Mr Porter of the Board of Trade (*Report on Import Duties*, p. 200), exhibits, in a striking point of view, the advantageous effects which have been produced by the past reductions of the duty :—

CONSUMPTION OF COFFEE IN GREAT BRITAIN.

Years.	Population.	Pounds Weight Consumed.	Rate of Duty.	Consumption per Head.	Tax per Head.
			s. d.	oz.	d.
1801............	10,942,646	750,861	1 6 per lb.	1·09	1¼
1811............	12,596,803	6,390,122	0 7 ..	8·12	4
1821............	14,391,631	7,327,283	1 0 ..	8·01	6
1831............	16,539,318	21,842,264	0 6 ..	21·13	8
1836............	18,275,946	24,920,820	0 6 ..	22·60	8½

The act 3 & 4 Wm. IV. c. 52, § 32, provides that no abatement of duties shall be made on account of any damage received by coffee ; and by 3 & 4 Wm. IV. c. 57, § 33, coffee may be abandoned for duty. [CUSTOMS. WAREHOUSE.] Coffee-dealers must take out a license renewable annually.

In London, coffee is sold in bond; the business is done in the market, either by public sale or private contract. The terms are—E. I. and W. I. British Plantation, 1 month, 1 per cent. discount, allowing 4 per cent. for cash; East India at a prompt of three months from the day of sale without discount; Foreign, 1 month, 2½ per cent. discount, and 4 per cent. for cash. The tares are the same as allowed by the revenue. The draft on B. P., namely, casks of 5 cwt. and upwards, 5 lbs.; under 5 cwt. 4 lbs.; barrels and bags, 2 lbs.; Foreign and East India, 1 lb.

The prices in bond of the different kinds of coffee in the London market in January 1841 were as follow :—

	s.	d.		s.	d.
Jamaica.					
Fine, Middling, & Fine Good Middling.........	112	0	to	135	0
Middling..................	106	0	..	110	0
Low do....................	102	0	..	104	0
Fine and Fine Fine Ord...	90	0	..	100	0
Good Ordinary...........	80	0	..	88	0
Ordinary.............. Triage..................	70	0	..	78	0
Demerara and Berbice.					
Good Middling to Fine....	108	0	..	130	0
Low Middling & Mid......	100	0	..	106	0
Good and Fine Ordinary..	78	0	..	98	0
Ordinary.............. Broken.................	70	0	..	84	0

	s.	d.		s.	d.
Dominica and St Lucia.					
Middling and Fine........	108	0	to	132	0
Good and Fine Ordinary..	80	0	..	100	0
Middling and Good.......	58	0	..	68	0
St Domingo, for export.....	42	0	..	47	0
Brazil............do.........	41	0	..	46	6
Havannah.					
Good and Fine Ordinary...	40	0	..	55	0
Middling and Good.......	58	0	..	68	0
Porto Rico & La Guayra....	41	0	..	72	0
East India, Java...........	56	0	..	70	0
Ceylon, certificate.........	72	0	..	80	0
Do. for export........					
Sumatra and Samarang.....	34	0	..	55	0
Mocha......................	105	0	..	135	0

We possess no precise information as to the period when coffee was first adopted as an article of diet. Its use during several centuries was peculiar to the east; and the city of Aden is the first on record that set the example of drinking it as a common refreshment about the middle of the 15th century; after which it rapidly extended to Mecca, Medina, and the other cities of Yemen. It was introduced at Grand Cairo about 1500, by dervises from Yemen resident in that city, where, however, it was opposed on religious grounds, from the persuasion that it had an inebriating quality; and in 1523, Abdallah Ibrahim having denounced it in a sermon, a violent commotion was produced, and the parties came to blows. Upon this, says a writer in Rees' Cyclopædia, the Sheik Elbelet, commander of the city, assembled the doctors, and after giving a patient hearing to their tedious harangues, treated them all with coffee, first setting the example by drinking it himself, and then dismissed the assembly without uttering a word. By this prudent conduct the public peace was restored, and coffee continued to be drunk without further molestation. At Constantinople, where it was introduced in 1554, it had to encounter both political and religious opposition; but it soon triumphed over every obstacle, and being taxed, produced a considerable revenue. Public officers are appointed to inspect and prepare it; and it is said that a refusal to supply a wife with coffee is one of the legal grounds of divorce in Turkey.

Coffee was brought into notice in the west of Europe in the seventeenth century. The first coffeehouse in London was opened in 1652 by a Greek named Pasqua, who had been servant to Daniel Edwards, a Turkish merchant, and the number soon increased. In 1675, Charles II. attempted to suppress them as places of resort dangerous to government, but without effect; and in 1698, it was supposed that there were as many of these houses of entertainment in London as in Grand Cairo; besides those to be met with in the principal towns throughout the country. The quantity consumed upon the whole, however, was unimportant, and derived solely from Arabia through the medium of Turkey, as coffee was not cultivated in the western hemisphere prior to the eighteenth century, when Van Hoorn, governor of Batavia, procured seeds from Mocha, and a plant reared by him was forwarded to the botanical garden at Amsterdam, the progeny of which was in 1718 sent to Guiana. The produce of another plant was about the same time transmitted by Louis XIV. of France to Martinico, and from these places the cultivation of the coffee-shrub rapidly extended throughout the West Indies and South America.

COIN, a flat circular piece of metal, impressed with a public stamp serving as a guarantee for its weight and fineness, and used as money. A variety of metals have been employed for this purpose; but the portability, permanent value, and uniform quality of gold and silver, have, from an early age, secured for them a general preference. Copper has also been very commonly used, especially for subsidiary coins; and of late years the Russian government has introduced platinum; but this last, though intrinsically well adapted for the purpose, has obtained only a partial circulation, from a want of confidence in the stability of its price.

Pure silver and gold, though invariable in their quality, are yet too flexible for the ordinary purposes of coin, and they are therefore mixed with a small proportion of harder metal, called *alloy*. The proportion of this, however, varies in different countries, and hence both the weight and the degree of fineness, or *standard*, of a coin have to be considered, the value of the alloy never being taken into account. In this country silver and gold are measured by troy weight; the fineness of silver is also denoted by the number of pennyweights and grains of pure metal contained in a troy ounce; but the fineness of gold is expressed in carats. Of these 24 are supposed to be contained in any given quantity of the metal, and its quality is denoted by expressing the number which consist of pure gold. The British money standard of silver has for a long period been 11 oz. 2 dwts., equal to a fineness of 37-40ths; and that of gold 22 carats, equal to a fineness of 11-12ths: these have been found to be the proportions best suited for durability.

Although coins of both silver and gold are found in almost all countries, yet a preference is commonly given to one or the other as the medium for large payments, or standard of value. In general silver has been adopted for this purpose, but in some countries gold is used; in others, both metals are employed,—their mutual convertibility being determined according to a fixed rate of exchange. It does not appear that either of the precious metals is naturally better suited than the other for a standard; but the adoption of both, though approved by Sir Isaac Newton, has been generally productive of disorder, owing to the variation in the market-prices to which silver and gold are subject, as well as other commodities, and the tendency thus produced of the one kind of coin to drive the other out of circulation. Formerly both metals were legal tender in England, and in 1717, their relative value was fixed at one guinea in gold, for 21 shillings in silver. This was an over-valuation of the former, to the extent of rather more than 1½ per cent., a difference which afterwards increased, and led, before the end of the century, to the fusion or exportation of all silver coins of full weight, and the exclusive use of gold in all large payments.

Previous to the reform of the British coinage in 1815 much discussion arose as to whether gold, silver, or both metals, should be employed as the standard of value. At length this was decided for the time by the "Treatise on the Coins of the Realm," by the first Earl of Liverpool, in which it was maintained, "that coins, which are the principal measures of property, should be composed of one metal only; that this metal should be gold (being that in which the principal payments in England are made); and that the expenses of fabrication should be taken out of the silver and copper coins." These principles were made the basis of the new regulations embodied in the act 56 Geo. III. c. 68; and the existing state of the British coinage is as follows:—

Gold is issued in pieces termed sovereigns (of 20 shillings) and half-sovereigns; the issue of double sovereigns is also authorized, but none are in circulation. These are coined at the rate of 1869 sovereigns from 40 troy pounds of standard metal; hence gold is minted at £3, 17s. 10½d. per ounce, and the full weight of the sovereign is 5 dwts. 3·274 grains. The sovereign of 5 dwts. 2¾ grains is, however, a legal tender, and the others in proportion.

Silver is issued in crowns (of 5 shillings), half-crowns, shillings (of 12 pence), sixpences, and groats or fourpences; a few pieces for 3d., 2d., and 1d., called *Maundy money*, are also made for the purpose of distribution as alms by the sovereign, but they are not in general circulation. These are all coined at the rate of 66 shillings from one pound of standard metal; hence silver is minted at 5s. 6d. per oz.; being an increase of 4d. per oz. from the rate prior to 1816, which was 5s. 2d.; and the full weight of the shilling is 3 dwts. 15 grains and 3-11ths.

Copper is issued in pennies, halfpennies, and farthings, at the rate of £224 per ton, or 24 pence from 1 lb. avoird. of metal.

The *Remedy of the Mint*, or allowance for the fallibility of workmanship, in regard to standard weight and fineness, is, for gold coins, 12 grains per lb. in the weight, and 1-16th of a carat in the fineness; for silver, 1 dwt. per lb. in the weight, and the same in the fineness; and for copper, 1-40th of the weight.

No *Seignorage* is exacted on gold coins, as they are minted at the market-value of that metal; but on silver coins a seignorage is at present levied of about 10 per cent. (the market-price being about 5s., and the mint price 5s. 6d. per oz.); while on copper coins it amounts to more than 100 per cent. It was enacted, however, that silver coins shall be a legal tender for 40s. only at one time,—copper coins for 12 pence only,—and "that gold coins shall be in future the sole standard measure of value and legal tender for payment, without any limitation of amount."

The amount of money coined in the 23 years 1816-1838 has been: *Gold*, 16,119 double sovereigns; 54,964,695 sovereigns; 8,526,451 half-sovereigns: *Silver*, 1,849,905 crowns; 31,051,938 half-crowns; 94,339,080 shillings; 52,915,235 sixpences; 87,412,938 fourpences: *Copper*, 21,450,240 pence; 28,304,640 half-pence; and 41,782,270 farthings; besides Maundy money, and small coins for the colonies. The total amount of coin in circulation in the United Kingdom at present is estimated to be about £40,000,000.

The loss on coins by abrasion has been variously estimated. According to experiments made at the Mint in 1833, the waste per cent. per annum appears to be, on sovereigns, from 9d. to 10½d.; on half-sovereigns, from 1s. to 1s. 6½d.; on half-crowns, from 2s. to 3s.; on shillings, from 2s. 3d. to 6s.; and on sixpences, from 7s. to 8s. These results, making allowance for the greater use of some coins than others, confirm the general estimate that gold possesses about four times the durability of silver.

The coining of money forms one of the exclusive prerogatives of the crown, and the counterfeiting of it constituted formerly the offence of high treason. At present the integrity of the coinage is guarded by the act 2 Wm. IV. c. 34, under which persons counterfeiting coin, or impairing it, are punished with transportation or imprisonment. Penalties are also imposed on those uttering false coins,—having three or more such pieces in their possession, with intent to put off the same,—and on those making, mending, or having in possession, any coining tools.

Foreign Coins are in this country regarded merely as bullion, and are valued according to the assayer's report of their purity. These reports are made in reference to the money-standards already mentioned; and the comparative difference of the metal assayed is called its *Betterness* or *Worseness*: thus, gold 23 carats 2 grains fine, is reported,—Better 1 carat 2 grains; and gold 20 carats,—Worse 2 carats: Also silver 11 oz. 4 dwts. fine, is reported,—Better, 2 dwts.; and silver 10 oz. fine,—Worse 1 oz. 2 dwts. The calculation of the quantity of standard gold or silver that could be obtained from the full weight of the given metal, according to the assay report of its purity, is termed the *Standarding of Gold and Silver*. Gold is valued either from the full weight, by a price varying according to its purity,—by the market-price per oz. standard, from the quantity of standard metal, or by the fixed mint-price; the latter being the usual rate for determining the intrinsic value of foreign coins as money. Dollar silver is usually sold by the full weight at a variable price per ounce; and other silver by the standard weight, at a variable price per ounce standard. Silver coins, however, are usually valued, in commercial works and for ordinary purposes, from the standard weight at the fixed price of 5s. per ounce standard,—a rate which varies little from the market-price of late years. Practical formulæ for standarding gold and silver, for ascertaining their value under different circumstances, and for the various other calculations which occur in bullion operations, will be found stated with much neatness in Mr Tate's "Manual of Foreign Exchanges" (p. 134-224). The following tables, compiled from that work, show the assays, weight, purity, and value of the principal foreign gold and silver coins, computing the former at the rate of £3 : 17 : 10½, and the latter at 5s. per ounce, British standards:—

TABLE OF THE PRINCIPAL FOREIGN GOLD COINS.

Country.	Names.	Assay Report.			Full Weight.		Standard Weight.		Pure Gold.	Value in Sterling.	
			car.	gr.	dwt.	gr.	dwt.	gr.	grains.	s.	d.
Austria	Half-sovereign	W	0	0¼	3	14	3	13·75	78·61	13	10·95
	Ducat	B	1	2¾	2	5¾	2	10·00	53·17	9	4·93
Bavaria	Max d'or	W	3	2¼	4	4	3	11·80	76·82	13	7·16
Denmark	Christian d'or	W	0	1	4	7	4	5·83	93·34	16	6·25
East Indies	Mohur	W	0	0¼	7	12	7	11·48	164·53	29	1·44
France	Napoleon	W	0	1½	4	3½	4	1·52	89·39	15	9·86
	Double Louis 48 livres	W	0	1½	9	20	9	15·97	212·64	37	7·63
Hanover	George d'or	W	0	1¼	4	6½	4	5·04	92·62	16	4·72
Holland	Ducat	B	1	2¼	2	5½	2	9·56	52·77	9	4·07
	10 florins	W	0	1½	4	7¾	4	5·68	93·21	16	5·97
Portugal	Dobraon	Stand.			34	12	34	12·00	759·09	134	4·01
	Joannese	W	0	0¼	9	6½	9	5·86	203·37	35	11·93
Russia	Half Imperial	Stand.			4	3½	4	3·59	91·20	16	1·71
Spain	Doubloon	W	1	0½	17	8½	16	11·20	362·26	64	1·40
United States, America	Half Eagle	W	0	2	5	9	5	6·06	115·56	20	5·40

Table of the Principal Foreign Silver Coins.

Country.	Names.	Assay Report.			Full Weight.		Standard Weight.		Pure Silver.	Value in Sterling.	
			oz.	dwt.	dwt.	gr.	dwt.	gr.	grains.	s.	d.
Austria	Species thaler of 2 fl.	W	1	2	18	1	16	6·09	360·83	4	0·76
Denmark	Rigsbank dollar	W	0	12	9	7	8	18·94	195·12	2	2·36
East Indies	Company's rupee	W	0	2	7	12	7	10·37	165·00	1	10·29
France	5 francs	W	0	6	16	1¾	15	15·32	347·17	3	10·91
Hamburg	Current mark	W	2	2	5	21½	4	18·73	106·12	1	2·34
Hanover	F. zweydrittel	B	0	16	8	9	8	23·48	199·32	2	2·93
Holland	Guilder or florin	W	0	8	6	22	6	16·01	148·01	1	8·00
Mexico	Dollar 1833	W	0	6½	17	11	16	22·73	376·22	4	2·84
Naples	Ducat del regno	W	1	2	14	18	13	6·91	295·00	3	3·86
Peru	Dollar 1833	W	0	5	17	7½	16	22·14	375·68	4	2·76
Portugal	Crusado novo	W	0	4	9	3	8	23·05	198·92	2	2·88
Prussia	Thaler	W	2	3	14	7	11	12·56	255·82	2	10·57
Rome	Scudo	W	0	3	17	1	16	19·47	373·21	4	2·43
Russia	Silver ruble	W	0	14	13	8	12	11·82	277·33	3	1·47
Spain	Pillar dollar	W	0	7	17	8	16	18·88	372·66	4	2·36
United States, America	Dollar	W	0	8	17	8	16	17·01	370·93	4	2·12
Venetian-Lombardy	6 lire	W	0	7	16	17½	16	4·84	359·67	4	0·60

For further information regarding foreign coins, see the heads of the different countries to which they belong: the more important coins are also noticed separately.

Historical Notice.—The origin of coined money is ascribed to the *Æginetans*, who are said to have possessed silver coins about 895 B. C. The coins next in point of antiquity are probably those of Lydia, and then the early Persian Darics (522-486 B. C.), which were both in gold and silver. No Hebrew coins occur earlier than those struck under the dominion of the Maccabees, about 150 B. C., and which are nearly all of copper. The first Greek coins were those of the cities, of which there is no chronological arrangement: the chief piece of money in use among the Athenians, and probably other Greeks also, was the Drachma, weighing, according to Paucton, 69 troy grains of silver. The earliest Roman coin was the *As*, first struck in the reign of Servius Tullius in the sixth century B. C. It originally consisted of 12 ounces, or 1 libra of copper, but it was gradually reduced until 214 B. C., when, according to Pliny, it was only 1 ounce.

Coins of gold and silver, and the inferior metals, are found in this country, that are usually attributed to the very ancient British kings, but the earliest coin of any importance was the silver penny, which was common in most European kingdoms, and usually bore the device of a cross.

In England, the silver penny has been coined from A. D. 688 to the present time, and it affords the best rule for valuing the other silver coins, as it has always formed the 240th part of the nummary pound. Its original weight of 22½ troy grains, was reduced in 1356 to 18 grains, in 1421 to 15 grains, and in 1464 to 12 grains. Its subsequent reductions were, in 1527, to 11½; in 1543 to 10;—in 1551 to 8 grains; in 1601 to $7\frac{23}{31}$ grains; and in 1816 to $7\frac{3}{11}$ grains. The standard for silver was 11 oz. 2 dwts. from the Conquest (1066) until 1543. Frequent changes took place from 1543 till 1560, when it was permanently fixed at the former rate. The standard for gold was 23 carats 3½ grains from 1344 to 1527. Considerable fluctuations afterwards took place; but in 1604 it was fixed at 22 carats; and at this rate it has since continued. The principal gold coins of the old standard were nobles of 6s. 8d., marks of 13s. 4d., angels of 10s., and sovereigns of 20s. each. Prior to 1816, the principal coin of the new standard was the guinea, first coined in 1666, and which was minted at the rate of 44½ to 1 lb. troy. The number of shillings in the guinea fluctuated from 20 to 30, until 1717, when, as already noticed, it was fixed at 21.

In Scotland, the money pound contained, from the time of Alexander I. to that of Robert Bruce, a pound of silver of the same weight and fineness with the English pound; but the weights of the coins were afterwards gradually reduced, and at the Union in 1707, the Scots money amounted to only $\frac{1}{36}$ of its original value,—the English having within the same time been reduced to about ⅓d. Scots money became thus only $\frac{1}{12}$th the value of English,—and hence £1 Scots = 1s. 8d. sterling, and the Scots merk of 13s. 4d. = 1s. $1\frac{1}{3}$d. sterling. The Act of Union placed the currency of Scotland on the same footing as that of England.

In Ireland, the gold and silver coins were from an early period those of England, but in the currency of that country they were reckoned for more than their British value. In 1698, the proportion of 12 to 13 was established in silver; in 1717 in gold; and in 1736 in copper. Hence, £100 sterling was equal £108, 6s. 8d. Irish, and the nominal par of exchange was 8⅓ per cent. The actual course of exchange was, however, sometimes 10 or 12 per cent. above par. The distinction betwixt the monies of the two countries was abolished by the act 6 Geo. IV. c. 79, which assimilated the currency of Ireland to that of Britain, from and after 5th January 1826. [Bullion. Money.]

COIR, a kind of cordage made, in Ceylon and other places, out of the fibrous covering of the cocoa-nut. It is much esteemed in India, and on some occasions preferred to that of Europe from its advantage of floating on the surface of the water. It forms a considerable article of export from Ceylon, and nearly 4000 cwts. are annually entered for home consumption in the United Kingdom.

COKE is an impure carbon procured from the distillation of pit coal, and generally obtained from coal-gas retorts. It has a porous texture, and more or less lustre. It is employed as fuel, and produces an intense and steady heat.

COLCOTHAR, or CROCUS, a reddish powder, obtained by the decomposition of green vitriol. It is an oxide of iron, and is used as a paint, and for polishing iron and glass.

COLLISION OF VESSELS. Injuries occasioned by one ship driving against or running foul of another, are frequently the foundation of claims and disputes on policies of insurance and otherwise. Such injury is held to be by a peril of the sea, and as such, the amount is recoverable under an ordinary policy. With regard to the ultimate incidence of the loss, it must come on the party whose misconduct has occasioned it, and there can be no recovery where the mischief is caused by the culpable negligence of the master or mariners of the vessel insured. Where neither party is to blame, the rule in this country is that the loss rests where it lights; by the maritime codes of some countries, the loss is, in such circumstances, divided between the owners of the two ships. (*Marshall on Insurance*, 494, 495.)

COLOCYNTH, COLOQUINTIDA, OR BITTER APPLE (Fr. *Colquinte*. Ger. *Coloquintt*. It. *Coloquintida*. Pers. & Arab. *Hunsil*), the fruit of an annual plant of the gourd kind (*Cucumis colocynthis*) found in Turkey and Nubia. It is about the size of an orange, smooth and yellow, but is peeled and dried before being imported, when it becomes whitish, very light, dry, and spongy, with a weak and disagreeable smell, and an intensely bitter nauseous taste. The medullary part, freed from the seeds, furnishes an extract which is in common use as a purgative. About 16,000 lbs. are annually entered for home consumption in the United Kingdom.

COLOMBIA, the name given to a republic which was formed, in 1819, of the northern part of South America, formerly divided under Spain into the viceroyalty of New Granada, comprising the audiencia of Quito, and the captain-generalship of Venezuela. In 1831, this republic was separated into the three republics of NEW GRANADA, VENEZUELA, and ECUADOR, or Quito,—the territories of which correspond nearly with the former divisions. During the existence of the republic of Colombia, it raised the following loans in London, namely, £2,000,000 in 1822, contracted with Messrs Herring, Graham, and Co., at 84 per cent.; £4,750,000 in 1824, contracted with Messrs B. A. Goldschmidt, & Co., at 88½ per cent. These loans bear interest at 6 per cent.; but none has been paid since 1826. The bonds for the first loan being *red*, and those for the other *black*, they are so distinguished in the money market. According to arrangements made at Bogota in January 1835, the amount of the loans was partitioned among the Colombian republics as follows:—New Granada to bear 50 parts, Venezuela, 28½ parts, and Ecuador 21½ parts. The branches of revenue appropriated by the late government, as a provision for the debt, consisted of ⅛th of the customs duties, the whole of the duties levied on gold and silver, and the revenues from the tobacco monopoly; these are now under charge of the separate republics, but the recent political dissensions have rendered them much less productive than formerly.

COLONY, a territory possessed and cultivated by a body of people drawn from a distant country to which it is politically united. The term, however, is used vaguely, to express an outlying part of the population of the mother-country, or an outlying territory belonging to it, either in conjunction, or any of the two by itself. In both ancient and modern times colonization has proceeded from the same causes, namely, commercial enterprise, political commotion, the desire of conquest, or the natural overflowing of population. The earliest of the ancient colonies were those formed by the Canaanites or Phœnicians, on the shores and islands of the Mediterranean, and more particularly on the N. coast of Africa; these owed their origin in most cases to a spirit of commercial adventure. The Greek colonies were formed partly from similar motives, but chiefly from the dissensions and superabounding population in the parent states. On the other hand, the Roman colonies were military stations, formed solely for the purpose of bridling subjugated provinces. These last always maintained an intimate connexion with Rome; but the Phœnician and Grecian colonies appear in most cases to have been independent states,—though a strong feeling of regard generally characterized their intercourse with their parent countries.

The spirit of colonial enterprise, dormant in the middle ages, was revived in the 13th century by the Italian republics, Genoa, Pisa, and Venice, which formed settlements in various parts of the Mediterranean and Levant. The modern European colonies, however, owe their origin to the ambition of the maritime states to participate in the Indian commerce formerly conducted by way of the Red sea, and monopolized by the Venetians. The discovery of the compass prompted navigators to attempt this by new channels. The Portuguese, after repeated failures, at length ascertained the eastern passage in 1497, when the Cape was doubled by Vasco de Gama; the Spaniards attempted a westerly course which led to the discovery, by Columbus, of the West Indies in 1492, and of South America in 1498; while the

English, restrained by the pope from profiting by the Portuguese and Spanish discoveries, despatched Sebastian Cabot by the north-west, a route which led him to Newfoundland and North America in 1497. The progress of commercial enterprise in the East is described under the head EAST INDIA COMPANY. In South America, Columbus's discoveries were followed by the conquest of Mexico in 1519 by Cortez, and of Peru by Pizarro and others in 1531. Brazil was settled by the Portuguese in 1500. The West Indian Islands, notwithstanding the papal grant in favour of Spain, were occupied by various nations; Hispaniola or Hayti in 1496; Jamaica, about 1510; Cuba, 1511; Porto-Rico, 1514; Barbadoes, 1605; and the others at later periods. The progress of colonization was much slower in N. America; Virginia was taken possession of by Raleigh in 1583, but soon after abandoned; and the first permanent English settlement, which was at Jamestown in the same state, was not formed until 1607. The colonization of N. America afterwards proceeded rapidly, particularly during the disturbances in England which attended and followed the dethronement of Charles I.; the cavaliers emigrating to Virginia, the Puritans to New England, and the Quakers to Pennsylvania. In 1776, the attempt of Great Britain to tax the American colonists for the purposes of the general government led to the political separation of the "United States" from the mother-country; and in 1810, revolutionary movements occurred in S. America which resulted in the emancipation of the Spanish colonies on that continent. The subsequent progress of these countries has been illustrative of the treatment previously received by them from the parent states. The English colonists, allowed free institutions, and a more extensive market for their surplus produce than the colonies of any other nation, acquired habits of self-government and industry; and their career, since becoming independent, has been peaceable and prosperous to an extent which now places them in commercial greatness above all countries of the world except Britain. The Spanish colonists on the other hand, oppressed with heavy taxes and crown monopolies, were subjected to a despotic government, under which they were excluded from all offices of emolument; education also was proscribed, and the Inquisition established. Under such training, the people became ignorant and depraved; and having adopted republican institutions, for which they were unfitted, have, by tumultuous and frivolous contentions, so far paralyzed industry and dissipated their resources, that these fine countries are now, with the exception perhaps of Chili, even much less productive than when under the wretched dominion of the mother-country.

Notwithstanding the separation of the United States, the British colonies remained of considerable extent; and many acquisitions having been since made, both by conquest and settlement, they now far exceed in importance those of all other states. Including fortified stations and other dependencies, Great Britain now possesses:—In *Europe;* Gibraltar, Malta, Gozo, and Heligoland: *North America;* Canada, Hudson's Bay Territory, Nova Scotia, New Brunswick, and the islands of Cape Breton, Prince Edward, and Newfoundland, together with the Falkland group off S. America: *West Indies;* Jamaica; the Windward Islands, Barbadoes, St Vincent, Grenada, Tobago, St Lucia, and Trinidad; the Leeward Islands, Antigua, St Christophers, Montserrat, Nevis, Anguilla, Dominica, and Virgin Isles; Bahama Islands; Bermuda Islands; Demerara, Berbice, and Essequibo in Guiana; and the settlement of Honduras in Central America: *Africa;* Cape of Good Hope; settlements in Guinea and Senegambia, including Bathurst, Sierra Leone, and Cape Coast Castle; the islands of Fernando Po, St Helena, Ascension, and Tristan d'Acunha; the Mauritius, and other small islands in the Madagascar Archipelago: *Australasia;* New South Wales; Swan River, and King George's Sound; South Australia; Van Diemen's Land; and New Zealand: *Asia;* the island of Ceylon. The immense territory of the East India Company in Hindostan, with their dependencies, Singapore, Penang, Malacca, and Aden, are not usually included in the list of British colonies.

The foreign possessions of *Spain* at present consist of Cuba, Porto-Rico, the Philippines, the Canaries, and settlements in Morocco: *Portugal* has the Madeiras and the Cape de Verde Islands; Angola, Benguela, Loango, and Mozambique in Africa; Goa in India; Macao in China; and a settlement in the island of Timor; *France* has the West Indian Islands Guadaloupe, Martinique, Marie-Galante, and Deseada; Cayenne in Guiana; the small islands of St Pierre and Miguelon in the vicinity of the Newfoundland fishing-ground; Algiers, Senegal, and Goree in Africa; the isle of Bourbon; St Marie in Madagascar; and Pondicherry and Chandernagore in India: *Holland* possesses Java, the Moluccas, and settlements in Sumatra, Celebes, Borneo, Banda, and other eastern islands; the West India

Islands Curaçao, St Eustatius, Saba, and part of St Martin; and Dutch Guiana: *Denmark* has Iceland, settlements in Greenland, the West India Islands St Croix, St Thomas, and St John; Christiansburg and other possessions in Guinea; and Tranquebar and Serampore in India: *Sweden* has the West India Island of St Bartholomew.

European Colonial Policy.—Every European power has endeavoured more or less to monopolize to itself the commerce of its colonies; but the manner in which this monopoly has been exercised by different nations has been very different. Some have given up the whole to an exclusive company; some, without establishing such a company, have confined the whole to a particular part of the mother-country; while others have left it free to their subjects at all ports. The last has been the general policy of Great Britain, which has been characterized by Dr Smith as comparatively more liberal than that of other European powers (*Wealth of Nations*, b. iv. c. 7). At an early period, indeed, the English colonists were allowed to follow their own interest in their own way; but on their commerce becoming of importance it was placed under regulations calculated to secure their consumption of English manufactures, the employment of English ships, and a preference to the English market for their surplus produce. In the exportation of their surplus produce, however, it was only with regard to certain commodities that the British colonies were confined to the market of the mother-country. These commodities having been enumerated in the act of navigation (12 Ch. II. c. 18) and in some other subsequent acts, were upon that account called *enumerated commodities*; the rest, called *non-enumerated*, could originally be exported directly to all parts of the world, provided it were in British or colonial ships; but they were afterwards (6 Geo. III. c. 52) confined, as to the European market, to the countries that lie south of Cape Finisterre, which, not being manufacturing countries, we were less jealous of the colonial ships carrying home from them any manufactures which could interfere with our own. The most perfect freedom of trade was permitted between the British colonies of America and the West Indies, both in the enumerated and in the non-enumerated commodities. Great Britain, too, while she confined to her own market some of the most important productions of the colonies, so in compensation she gave to some of them an advantage in that market, sometimes by imposing higher duties upon the like productions when imported from other countries, and sometimes by giving bounties upon their importation from the colonies. The comparative liberality of England, however, towards the trade of her colonies was confined chiefly to what concerned the market for their produce either in its rude state, or what might be called the very first stage of manufactures. The more advanced or more refined manufactures even of the colony-produce were reserved to the merchants and manufacturers of Great Britain; and their establishment in the colonies was prevented sometimes by high duties, and sometimes by absolute prohibitions. But these restrictions, though selfish and tyrannical, did not materially affect the prosperity of the colonies, as in all newly settled countries labour yields the most profitable return when applied to the cultivation of the soil.

The colonial policy of Great Britain, though perhaps more liberal than that of other states, was thus wholly influenced by the narrow-minded principles which characterize the "mercantile system." In modern times, it has undergone important modifications, but it still contains much that is exceptionable. The present colonial tariff is so framed that the West India colonies are obliged to bring provisions and lumber from British America in British ships, though these articles might be obtained cheaper direct from the United States: they are also prevented from refining sugar, though this is an operation which they themselves could conduct with much advantage in the colonies. In return for these sacrifices, and the discriminating duties imposed in favour of British manufactures, the colonies are, as afterwards explained, virtually allowed the monopoly of the home-market for the sale of their produce. Under certain conditions of reciprocity as to the vessels employed, the colonies are allowed to ship their produce to all parts of the world; but their intercourse with foreign countries is of little importance, owing to the superior facilities for trade possessed by the mother-country.

The existing Regulations of the British Colonial Trade are chiefly embodied in the act 3 & 4 Wm. IV. c. 59, of which the following is an abstract:—

§ 1. Act 6 Geo. IV. c. 114, and succeeding acts consolidated.

Free Ports, § 2. No goods shall be imported to, nor (except the produce of the fisheries in British ships) exported from any of the British possessions in America by sea, from or to any place other than the United Kingdom, or some other of such possessions, under pain of forfeiture, except at the several "free ports." (These are enumerated under the heads of the several colonies to which they belong.)

§§ 3. 4. Additions may be made to the number of free ports by order of council; and ports may also be established for limited purposes.

Foreign Ships, §§ 5, 6. The privileges granted by the Navigation Law to foreign ships shall be limited to the ships of those countries which, having colonial possessions, shall grant the like privileges of trading with those possessions to British ships, or which, not having colonial possessions, shall place the commerce and navigation of this country, and of its possessions abroad, upon the footing of the most favoured nation, unless it shall be otherwise provided by order in council. But nothing contained in this act shall affect the acts 4 Geo. IV. c. 77, and 5 Geo. IV. c. 1, for regulating the trade of foreign ships.

Prohibitions and Restrictions, § 7. The several sorts of goods described in the table following are prohibited to be imported into the British possessions in America, or shall be so imported only under the restrictions mentioned in such table:—

Table of Prohibitions and Restrictions.

Gunpowder, arms, and ammunitions, or utensils of war, are prohibited to be imported, except from the U. K. or from some other B. P.

Tea prohibited, except from the U. K., or from some other B. P. in America, unless by the East India Company, or with their license, during the continuance of their exclusive right of trade.

Fish, dried or salted, and oil, blubber, fins, or skins, the produce of creatures living in the sea, are prohibited, except from the U. K. or some other B. P., or unless taken by British ships fitted out from the U. K. or from some B. P., and brought in from the fishery, and except herrings from the Isle of Man.

Coffee, sugar, molasses, and rum, being of foreign production, or the production of any place within the limits of the East India Company's charter, are prohibited to be imported into any B. P. on the continent of S. America or in the W. Indies (the Bahamas and Bermudas not included), except to be warehoused for exportation only; and may also be prohibited to be imported into the Bahamas or the Bermudas by order in council.

Base or counterfeit coin, and books (such as are prohibited to be imported into the U. K.), are prohibited to be imported.

And goods imported contrary hereto, forfeited; also the ship, if of less burthen than 70 tons.

§ 8. *All coffee, sugar, molasses, and rum* (although of the British plantations), exported from any B. P. in America, into which the like goods of foreign production can be imported, shall upon subsequent importation from thence into any B. P. in America, into which such goods, being of foreign production, cannot be imported, or into the U. K., be deemed to be of foreign production, unless warehoused under the provisions of this act, and exported direct to such other B. P., or to the U. K.

§ 9. *Table of Duties.*

Duties payable upon Spirits, being of the Growth, Production, or Manufacture of the United Kingdom, or of any of the British Possessions in America or the West Indies, imported into Newfoundland or Canada.

Spirits imported into Newfoundland, the produce of any B. P. in S. America or W. Indies, if imported from any B. P. in America, or from the U. K., the gallon . .	£0 0 6
If imported from any other place, to be deemed foreign, and charged duty as such.	
Spirits imported into Newfoundland, the produce of any B. P. in N. America, or of the U. K., and imported from the U. K., or from any B. P. in America, the gallon	£0 1 6
If imported from any other place, to be deemed foreign, and charged duty as such.	
Spirits imported into Canada, the produce of any B. P. in S. America or W. Indies, and imported from any B. P. in America, or from the U. K., the gallon	0 0 6
Imported from any other place, to be deemed foreign, and charged duty as such.	

Note.—When imported from the U. K., this duty is not to be abated upon the ground of any duty under any colonial law.

Duties payable upon Commodities, not being of the Growth, Production, or Manufacture of the United Kingdom, or of any of the British Possessions in America, imported into any of the British Possessions in America.

Imported into the British Possessions in the West Indies, or on the continent of South America, or into the Bahama or Bermuda Islands, viz. wheat flour, the barrel	£0 5 0
But if imported from any B. P. in N. America, or from the warehouse in the U. K.	Free.
Shingles, not more than 12 inches in length, the 1000	0 7 0
Shingles, more than 12 inches in length, the 1000	0 14 0
But if imported from any B. P. in N. America, or from the warehouse in the U. K.	Free.
Red oak staves and headings, the 1000 .	0 15 0
But if imported from any B. P. in N. America, or from the warehouse in the U. K.	Free.
White oak staves and headings, the 1000	0 12 6
But if imported from any B. P. in N. America, or from the warehouse in the U. K.	Free.
Pitch pine lumber, one inch thick, the 1000	1 1 0
But if imported from any B. P. in N. America, or from the warehouse in the U. K.	Free.
White and yellow pine lumber, 1 inch thick, the 1000 feet	1 1 0
But if imported from any B. P. in N. America, or from the warehouse in the U. K.	Free.
Dyewood and cabinetmakers' wood .	Free.
Other kinds of wood and lumber, 1 inch thick, the 1000 feet	1 8 0
Wood hoops, the 1000	0 5 3
But if imported from any B. P. in N. America, or from the warehouse in the U. K.	Free.
Beef and pork, salted, of all sorts, the cwt.	0 12 0
But if imported from any B. P. in N. America	Free.
Imported into New Brunswick, Nova Scotia, or Prince Edward Island, viz. wheat flour, the barrel . . .	0 5 0
Beef and pork, salted, of all sorts, the cwt.	0 12 0
Fresh, brought by land or inland navigation	Free.
Imported into any of the B. P. in America, viz. spirits: brandy, Geneva, or cordials, and other spirits, except rum, the gallon	0 1 0
And further, the amount of any duty payable for the time being on spirits, the manufacture of the U. K.	
Rum, the gallon	0 0 6

And further, the amount of any duty payable for the time being on rum of the B. P. in S. America or W. Indies.	
N.B.—Rum, although British, if imported from any B. P. in which foreign rum is not prohibited, is treated as foreign, unless it had been warehoused, and exported from the warehouse.	
Wine in bottles, the tun . .	£7 7 0
And further, for every £100 of value	7 10 0
And on the bottles, the dozen . .	0 1 0
Bottled in and imported from the U. K., for every £100 of the value .	7 10 0
The bottles	Free.
Wine not in bottles, for every £100 of value	7 10 0
Imported into B. P. in N. America from Gibraltar or Malta, subject to no higher duty than if imported from the U. K., viz. one-tenth of the duty remitted.	
Coffee, cocoa, and sugar, the cwt. .	0 5 0
Molasses, the cwt.	0 3 0
And further, the amount of any duty payable for the time being on coffee, cocoa, sugar, and molasses, the produce of B. P. in S. America or W. Indies.	
Clocks and watches, leather manufactures, linen, musical instruments, wires of all sorts, books and papers, silk manufactures, for every £100 of the value	30 0 0
Glass manufactures, soap, refined sugar, sugar candy, manufactured tobacco, and cotton manufactures, for every £100 of the value . . .	20 0 0
Alabaster, anchovies, argol, aniseed, amber, almonds, brimstone, botargo, boxwood, currants, capers, cascacoo, cummin seed, coral, cork, cinnabar, dates, essences of bergamot, lemons, roses, citron, oranges, lavender, and rosemary, emery stone, fruit preserved in sugar or brandy, figs, honey, iron in bars, unwrought and pig iron, juniper berries, incense of frankincense, lava and Malta stone for building, lentils, marble rough and worked, mosaic work, medals, musk, macaroni, nuts of all kinds, oil of olives, oil of almonds, orris root, ostrich feathers, ochres, orange buds and peel, olives, pitch, pickles in jars and bottles, paintings, pozzolana, pumice-stone, punk, Parmesan cheese, pickles, prints, pearls, precious stones except diamonds, quicksilver, raisins, sausages, sponges, tar, turpentine, vermilion, vermicelli, and whetstone, for every £100 of the value . .	7 10 0
Goods, wares, and merchandise, not otherwise charged with duty, and not herein declared to be free of duty, for every £100 of the value . .	£15 0 0
Coin, bullion, diamonds, live-stock, tallow, raw hides, rice, corn and grain unground, biscuit or bread, meal or flour except wheat flour, fresh meat, fresh fish, carriages of travellers .	Free.
Wheat flour, beef and pork, hams and bacon, wood and lumber, imported into Canada	Free.
Wood and lumber, imported into New Brunswick, Nova Scotia, or Prince Edward Island	Free.
Hay and straw, fresh fruit and vegetables, salt, and cotton-wool . . .	Free.
Goods, the produce of places within the limits of the E. I. Co.'s charter, imported from those places, or from the U. K., or from some place in the British dominions	Free.
Herrings taken and cured by the inhabitants of the Isle of Man, and imported from thence . . .	Free.
Lumber, the produce of and imported from any B. P. on the W. coast of Africa	Free.
Any sort of craft, food and victuals except spirits, and any sort of clothing, and implements and materials fit and necessary for the British fisheries in America, imported into the place at or from whence such fishery is carried on	Free.
Drugs, gums or resins, dye-wood and hard-wood, cabinetmakers' wood, tortoiseshell, hemp, flax, and tow .	Free.
Seeds, wheat flour, fruits, pickles, woods of all sorts, oakum, pitch, tar, turpentine, ochres, brimstone, sulphur, vegetable oils, burr-stones, dog-stones, hops, cork, sago, tapioca, sponge, sausages, cheese, cider, wax, spices, and tallow, imported direct from the warehouse in the U. K.	Free.
All goods imported from the U. K., after having there paid the duties of consumption, and being exported from thence without drawback . .	Free.

And if any of the said goods be imported through the U. K. (having been warehoused therein, and exported from the warehouse, or the duties thereon, if there paid, having been drawn back), one-tenth part of the duties herein imposed shall be remitted in respect of such goods.

Acts and Duties not Repealed, §§ 10, 11. Nothing in this act to affect the act 18 Geo. III. c. 12, nor any previous act now in force by which duties in any B. P. in America were granted to the crown; nor to repeal the 31 Geo. III. c. 31. And the duties* imposed by any of the acts

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* The following is a Table of the principal duties here referred to:—

Duties (commonly called Crown Duties) payable on Goods Imported into the British Possessions in America, over and above any other Duties.

TABLE OF DUTIES,

Under the act 4 Geo. III. c. 15.	
Wine, except French wine, viz.: of the growth of the Madeiras, or of any other island or place from which such wine may be lawfully imported, and which shall be so imported from such island or place, the tun .	£7 0 0
Portugal, Spanish, or any other wine (except French wine), imported from the U. K., the tun . . .	0 10 0
Under the act 6 Geo. III. c. 52.	
Molasses and syrups, the gallon .	0 0 1
Pimento (British) the lb. . . .	0 0 0½
Under the act 14 Geo. III. c. 88. (On importation into Canada only.)	
Spirits, viz.: Brandy, or other spirits, of the manufacture of the U. K., the gallon	£0 0 3
Rum, or other spirits, which shall be imported or brought from any of his Majesty's sugar colonies in the West Indies, the gallon . . .	0 0 6
Rum, or other spirits, which shall be imported or brought from any other of his Majesty's colonies or dominions in America, the gallon . .	0 0 9
Brandy, and other spirits of foreign manufacture, imported or brought from the U. K., the gallon . . .	0 1 0
Rum, or spirits, of the produce or manufacture of any of the colonies or plantations in America, not in the possession or under the dominion of his Majesty, imported from any other place except the U. K., the gallon .	0 1 0

herein before mentioned or referred to, passed prior to the 18 Geo. III. c. 12, shall be applied for the purposes of those acts: Provided no greater proportion of the duties imposed by this act, except as herein before excepted, shall be charged upon any article which is subject also to duty under any of the said acts, or subject also to duty under any colonial law, than the amount, if any, by which the duty charged by this act shall exceed such other duty or duties: Provided nevertheless, that the full amount of the duties mentioned in this act, whether on account of such former acts, or on account of such colonial law, or on account of this act, shall be levied under the regulations of this act.

Currency, Weights, and Measures, § 12. All sums imposed by this act, in the B. P. in America, shall be deemed to be sterling money of Great Britain; and such monies may be received according to the proportion and value of five shillings and sixpence the ounce in silver; and all duties shall be paid in every part of the B. P. in America, according to British weights and measures in use on the 6th July 1825.

§ 13. *The Produce of the Duties*, except crown duties, under acts prior to 18 Geo. III. c. 12, shall be paid by the Collector to the Treasurer of the colony.

Tonnage Duties, § 14. All British vessels shall be subject to equal tonnage duties in the colonies, except coasting-vessels.

Drawback at Newfoundland, § 15. Upon the exportation from Newfoundland to Canada of rum or other spirits, the produce of B. P. in S. America or W. Indies, a drawback allowed of duties paid upon importation thereof into Newfoundland: Provided such spirits shall be shipped within one year of the importation, and such drawback claimed within one year from day of shipment.

Report of Ship and Cargo, § 16. The master of every ship arriving in any B. P. in America, or Guernsey, Jersey, Alderney, or Sark, shall come directly, and before bulk be broken, to the customhouse, and report in writing to the collector or comptroller, or other proper officer, of the arrival and voyage of such ship, stating her name, country, and tonnage, and if British, the port of registry, the name and country of the master, the country of the owners, the number of the crew, and how many are of the country of such ship, and whether she be laden or in ballast, and if laden, the marks, numbers, and contents of every package on board, and where the same was laden, and where and to whom consigned, and where any and what goods, if any, had been unladen during the voyage, as far as any of such particulars can be known to him; and shall further answer all such questions concerning the ship, cargo, crew, and voyage, as shall be demanded of him. Penalty for non-compliance, £100; and goods not reported shall be forfeited.

Entry Outwards, §§ 17, 18. The master of every ship bound from any B. P. in America, or Guernsey, Jersey, Alderney, or Sark, shall, before any goods be laden, deliver to the proper officer an entry outwards, under his hand, of the destination of such ship, stating her name, country, and tonnage, and if British, the port of registry, the name and country of the master, the country of the owners, the number of the crew, and how many are of the country of such ship; penalty for non-compliance, £50; and before such ship depart, the master shall deliver to the proper officer a content in writing, under his hand, of the goods laden, and the names of the respective shippers and consignees of the goods, with the marks and numbers of the packages or parcels of the same, and shall make a declaration to the truth of such content, as far as can be known to him; and the master of every ship bound from any B. P. in America, or Guernsey, Jersey, Alderney, or Sark, whether in ballast or laden, shall before departure come before the collector, or other proper officer, and answer upon oath, all such questions concerning the ship, and the cargo, if any, and the crew, and the voyage, as shall be demanded of him; and thereupon the collector and comptroller, or other proper officer, if such ship be laden, shall give a certificate of clearance; penalty for not clearing, £100. Goods not stated in certificate to be produce of B. P. to be deemed of foreign production.

§ 19. Whenever any ship clears out from Newfoundland or other part of his Majesty's dominions, for the fisheries of Newfoundland or its dependencies, a fishing certificate is to be substituted for a clearance; but such certificate to be given up at end of season; and ships trading shall forfeit their certificate.

Entry of Goods, § 20. No goods shall be laden or water-borne to be laden, on board, or unladen from any ship, in any of the B. P. in America, or Guernsey, Jersey, Alderney, or Sark, until due entry made, and warrant granted; and no goods shall be so laden or unladen, except at some place at which an officer of customs is appointed to attend, or for which a sufferance shall be granted; and no goods shall be so laden or unladen except with permission of the proper officer; all goods laden, water-borne, or unladen contrary to regulations, shall be forfeited.

§ 21. The person entering any such goods shall deliver to the proper officer a bill of entry thereof, containing name of exporter or importer, ship, master, place to or from which bound, place where the goods are to be laden or unladen, particulars of goods, and their packages, including marks and numbers, and whether such goods be the produce of the B. P. in America or not; and such person shall at the same time pay all duties thereon; and the proper officer shall thereupon grant warrant for the lading or unlading of such goods.

§ 22. The importer, when he cannot, for want of full information, make perfect entry, may make an entry by bill of sight, by the best description which can be given; but within three days after landing of goods a perfect entry must be made, and duties paid.

§§ 23, 24. In all cases where the duties are charged according to the value thereof, such value shall be ascertained by the declaration of the importer, or his agent, in form following:—

"I, A. B., do hereby declare, That the articles mentioned in the entry, and contained in the packages [*here specifying them, and describing marks and numbers*] are of the value of
Witness my hand, the day of
A. B.
The above declaration, signed the day of
in the presence of C. D. collector [*or other principal officer*]."

Which declaration shall be written on the bill of entry of such articles: Provided that if it shall appear that the said articles are not truly valued, then the importer or his agent shall be required to declare on oath what is the invoice price, and that he verily believes such invoice price is the current value of the articles at the place from whence they were imported; and such invoice price, with the addition of ten per centum thereon, shall be deemed to be the value of the articles, and upon which the duties shall be paid: Provided also, that if it shall appear to the collector, or other proper officer, that such articles have been invoiced below the true value thereof, or if the invoice price is not known, the articles shall be examined by two competent persons, to be appointed by the governor, and such persons shall declare on oath what is their true value in such colony; and the value so declared shall be deemed to be the true value upon which the duties shall be paid. And if importer refuse to pay such duty, the goods may be sold.

§ 25. If goods be not entered and landed in twenty days, the officer may land and secure them; and if duties be not paid within three months, goods to be sold.

§ 26. No goods shall be imported into any B. P. as being imported from the U. K., or other B. P. (if any advantage attach to such distinction), unless such goods appear upon the cockets, or other proper documents, to have been duly cleared outwards at the port of exportation, nor unless the ground upon which such advantage be claimed be stated therein.

§ 27. No goods shall, upon importation into any B. P. in America, be deemed to be of the production of the U. K., or of any B. P. in America, unless imported from the U. K., or some B. P. in America.

§ 28. No entry nor warrant for landing, or taking goods out of warehouse, valid, unless the particulars of the goods and packages in such entry shall correspond with the particulars in the report of the ship, by which the importation or entry is authorized, nor unless the goods shall have been properly described in such entry by the characters according to which such goods are charged with duty or may be imported; and any goods taken out of any ship or warehouse by virtue of any entry or warrant not agreeing in all such respects, shall be deemed to be goods landed or taken without due entry, and forfeited.

Certificate of Production, § 29. Before any sugar, coffee, cocoa, or spirits, shall be shipped for exportation in any B. P. in America or in Mauritius, as being the produce of such possession, the proprietor of the estate on which such were produced, or his agent, shall make affidavit declaring that such goods are the produce of such estate; and such affidavit shall set forth the name of the estate, the description and quantity of the goods, the packages, with their marks and numbers, and the name of the person to whose charge, at the place of shipment, they are to be sent; and the person entering and shipping such goods shall deliver such affidavit to the collector or comptroller, or other proper officer, and shall subscribe a declaration before him, that the goods to be shipped by virtue of such entry are the same as are mentioned in such affidavit; and the master of the ship in which such goods shall be laden shall, before clearance, make and subscribe a declaration before the collector or comptroller, that the goods shipped by virtue of such entry are the same as are mentioned in such affidavit; and thereupon the collector or other officer shall give to the master a certificate of production, stating that proof has been made, in manner required by law, that such goods (describing the same) are the produce of such B. P., and setting forth the name of the exporter, ship, master, and destination of the goods; and if any sugar, coffee, cocoa, or spirits, be imported into any B. P. in America, as being the produce of some other such possession, without such certificate, the same shall be forfeited.

Certificate on Re-exportation from another Colony, § 30.

Inland Trade of British America, § 31-35.

Free Warehousing Ports, § 36. These are enumerated under the heads of the colonies in which they are respectively situated.

§ 37-48. *Regulations of the Warehouses.*

Mauritius, § 49. This island to be on the same footing as the W. Indies, as to duties, exportation, and importation.

Cape of Good Hope. § 50. In all trade with B. P. in America, the Cape of Good Hope, and dependencies, shall be deemed to be within the limits of the E. I. Co.'s charter.

Dutch Proprietors in Guiana, §§ 51, 52. The Dutch proprietors in Demerara, Essequibo, and Berbice, may supply their estates from Holland; but such proprietors may not export to the U. K. or colonies.

§ 53. Persons deemed Dutch proprietors.

§ 54. Persons not wishing to be considered Dutch proprietors to sign a declaration to that effect.

Intercourse between Jamaica and St Domingo Prohibited, § 55.

Miscellaneous Regulations, § 56. All laws or customs, in any B. P. in America, repugnant to this or any act of the U. K., so far as such act shall relate to said possessions, shall be null and void.

§ 57. No exemption from duty in any B. P., contained in any act of parliament, shall extend to any duty not imposed by act of parliament, unless and so far only as any duty not so imposed is or shall be expressly mentioned in such exemption.

§ 58. It shall be lawful for the officers of customs to board any ship, in any port, in any B. P. in America, and to search for prohibited and uncustomed goods, and also to board any ship hovering within one league of any of the coasts thereof.

§ 59. All vessels, boats, carriages, and cattle, made use of in the removal of any goods, liable to forfeiture under this act, shall be forfeited; and every person who shall be concerned in the removal or harbouring of such goods, shall forfeit the treble value thereof, or the penalty of £100 at the election of the officers of customs.

§ 60-80. Specific regulations as to seizures and the recovery of penalties.

King may Regulate Trade of certain Colonies, § 81. His Majesty, by orders in council, may make such regulations touching the trade to and from any B. P. on or near the continent of Europe, or within the Mediterranean, or in Africa, or within the limits of the E. I. Co.'s charter (excepting the possessions of the said Company), as shall appear expedient.

East Indies. § 82 Regulates the trade of the Company with the colonies in America, during the continuance of their privileges; also the trade in tea under their license, from China to the said colonies.

§ 83. It shall be lawful for the shipper of any sugar, the produce of some B. P. within the limits of the E. I. Co.'s charter, to be exported from any place in such possession, to go before the chief officer of the customs at such place, or, if there be no such officer, to go before the principal officer, or the judge or commercial resident, and make affidavit that such sugar was *bona fide* the produce of such B. P.; and such officer is required to administer such affidavit, and to grant a certificate, setting forth the name of the ship in which the sugar is to be exported, and its destination.

§ 84. All ships built within the limits of the E. I. Co.'s charter prior to the 1st January 1816, and which then and since have been solely the property of his Majesty's subjects, shall be deemed to be British ships for all the purposes of trade within the said limits, including the Cape of Good Hope.

Cape Wine Certificate, § 85. The shipper of any wine, the produce of the Cape of Good Hope, which is to be exported from thence, may go before the chief officer of the customs, and make affidavit that such wine was *bona fide* the produce thereof; and such officer is hereby required to administer such affidavit, and to grant a certificate thereof, setting forth the name of the ship in which the wine is to be exported, and its destination.

Channel Islands, § 86. Any person who is about to export from Guernsey, Jersey, Alderney, or Sark, to the U. K., or to any B. P. in America, goods the produce of any of those islands, or manufactured from materials which were the produce thereof, or of the U. K., may go before a magistrate of the island, and make a declaration that such goods are of such produce, or manufacture, and such magistrate shall administer such declaration; and thereupon, the governor, lieutenant-governor, or commander-in-chief of the island from which the goods are to be exported, shall, upon delivery of such declaration, grant certificate of the proof contained therein, stating the ship in which, and the port to which, in the U. K., or in any such possession, the goods are to be exported; and such certificate shall be the proper document to be produced at such ports respectively, in proof that the goods mentioned therein are of the produce or manufacture of such islands respectively.

§ 87. During the continuance of the E. I. Co.'s exclusive right of trade it shall not be lawful to import into Guernsey, Jersey, Alderney, or Sark, any tea, except from the U. K.

§ 88. No brandy, Geneva, or other spirits (except rum of B. P.) shall be imported into or exported from Jersey, Guernsey, Alderney, or Sark, or removed from any one to any other of said islands, or coastwise in any vessel of less burden than 100 tons (except when imported from the U. K. in ships of 70 tons at least), nor in any package of less content than 40 gallons, (except when in bottles, and carried in a square-rigged ship), nor any tobacco or snuff in any vessel of less burden than 100 tons (except when imported from the U. K. in ships of 70 tons at least), nor in any package containing less than 450 lbs. (except such spirits or loose tobacco as shall be for the use of the seamen, not exceeding 2 gallons of the former, and 5 lbs. of the latter, for each, and also except such manufactured tobacco or snuff as shall have been duly exported as merchandise from Great Britain or Ireland), on pain of forfeiture of such spirits, tobacco, or snuff, respectively, together with the packages, the vessel, and the apparel thereof.

§ 89. Nothing herein contained shall extend to vessels not above ten tons, supplying island of Sark, having license so to do.

§ 90. Every person who shall be discovered to have been on board any vessel liable to forfeiture under any act relating to the customs, for being found within one league of Guernsey, Jersey, Alderney, or Sark, having on board or conveying, or having conveyed, in any manner, such goods as subject such vessel to forfeiture, or who shall be discovered to have been on board any vessel from which any part of the cargo shall have been thrown overboard during chase, or destroyed, shall forfeit £100.

British Coals, § 91. Not lawful for any person to re-export, from any of his Majesty's possessions abroad, to any foreign place, any coals, the produce of the U. K., except upon payment of the duty to which such coals would be liable upon exportation from the U. K. to such foreign place; and no such coals shall be shipped at any of such possessions, to be exported to any British place, until the exporter or master shall have given bond, with surety, in double the value of the coals, that such coals shall not be landed at any foreign place.

False Documents, § 92. Every person who shall, in any of his Majesty's possessions abroad, counterfeit or falsify, or wilfully use when counterfeited or falsified, any entry, warrant, cocket, or other document for the unlading, lading, entering, reporting, or clearing any vessel, or for the landing, shipping, or removing of any goods or article whatever, or shall by any false statement procure any writing or document to be made for any such purposes, or shall falsely make oath or affirmation, or shall counterfeit a certificate of said oath or affirmation, or shall publish such certificate, knowing the same to be so counterfeited, shall for every such offence forfeit £200.

Colonial Monopoly of the Home Market.—The British colonies, as already mentioned, are virtually allowed a monopoly of the home market for the sale of the principal articles of their produce. This is effected by fixing in the British tariff the duties on commodities imported from the colonies at a much lower rate than when the same description of commodities are imported from foreign countries. The following is a table of the chief differential duties in favour of the colonies :—

	Duties.							Duties.					
	Foreign.			Colonial.				Foreign.			Colonial.		
	£	s.	d.	£	s.	d.		£	s.	d.	£	s.	d.
Raw sugar .... *cwt.*	3	3	0	1	4	0	Rice .... *cwt.*	0	15	0	0	1	0
Molasses .... *cwt.*	1	3	9	0	9	0	Rough rice .... *qr.*	1	0	0	0	0	1
Coffee .... *lb.*	0	1	3	0	0	6	Fish oil .... *tun*	26	12	0	0	1	0
Spirits .... *gall.*	1	2	6	0	9	0	Seed oils .... *tun*	39	18	0	0	1	0
Wines .... *gall.*	0	5	6	0	2	9	Bark .... *cwt.*	0	0	8	0	0	1
Timber .... *load*	2	15	0	0	10	0	Extract of bark ...... *cwt.*	0	3	0	0	0	1
Cotton wool .... *cwt.*	0	2	11	0	0	4	Honey .... *cwt.*	0	15	0	0	5	0
Sheep's wool .... *lb.*	0	0	1	free			Wax .... *cwt.*	1	10	0	0	10	0
Tallow .... *cwt.*	0	3	2	0	1	0	Ashes .... *cwt.*	0	6	0	free		
Soap, hard .... *cwt.*	4	10	0	1	8	0	Cocoa .... *lb.*	0	0	6	0	0	2
.... soft .... *cwt.*	3	11	3	1	3	0	Arrow root .... *cwt.*	0	18	8	0	1	0

N. B. Stated exclusive of late addition of 5 per cent.

Besides these a protective duty of about 100 per cent. is imposed on hides and skins; furs also are protected, if from North America (chiefly Hudson's Bay). Spices, and in short all tropical productions, have likewise high differential duties in favour of the colonies.

The practical effect of these protective duties was, until lately, the complete exclusion from our markets of many of the foregoing articles when imported from foreign countries, and especially the great staples of our West India islands; but within the last two years, owing, on the one hand, to the diminished production of these colonies since the abolition of negro slavery, and, on the other, to the increased consumption of this country, coffee and sugar of foreign growth have been entered for home consumption in considerable quantities,—the coffee by an evasion of the law that is practised by transhipping it at the Cape of Good Hope, which, being within the limits of the East India Company's charter, allows it to be introduced at a modified duty of 9d., instead of 1s. 3d. per lb.; and sugar, in consequence of the great rise of price, from the circumstances just mentioned, having more than counterbalanced the extra duty payable on the foreign articles. But before these operations could be carried on to advantage by the importer, the rise of price has been necessarily so great that the British consumer has had to pay nearly double what is charged for the same articles on the continent of Europe. The differential duty upon timber is also highly injurious, from its having the effect of substituting the inferior kind obtained in North America for the superior article of the north of Europe. [COFFEE. SUGAR. TIMBER.]

The injurious operation of the existing system of legislation in regard to the trade of the colonies, and in particular the hardship which it imposes upon the British consumer, have of late attracted increased attention, as is proved by the Report made last session (1840) by the Select Committee of the House of Commons upon Import Duties. The evidence collected by the committee was so conclusive as regards the vicious effects of the present system, that they felt no difficulty in urging its immediate modification, if not repeal. "Your committee," the Report bears, "farther recommend, that, as speedily as possible, the whole system of differential duties and of all restrictions should be reconsidered, and that a change therein be effected in such a manner that existing interests may suffer as little as possible in the transition to a more liberal and equitable state of things. Your committee is persuaded that the difficulties of modifying the discriminating duties which favour the introduction of British colonial articles would be very much abated if the colonies were themselves allowed the benefits of free trade with all the world." (*Report*, p. vi.)

The Advantages of Colonies have been exaggerated by some, and perhaps too much underrated by others. Such establishments relieve the parent state of its superabundant population, and afford the chance of acquiring property to many who have no means at home. On the other hand, they receive from the parent state that protection and countenance which is essential to their progress as civilized communities. But in a commercial point of view, the foundation of their reciprocal benefits is, that they afford good markets to each other; while the identity of tastes, habits, and opinions, renders the intercourse of business between them more easy, agreeable, and steady than between nations of different origin. It is, however, indispensable to the continued existence of this mutual interest and affection, that the commercial intercourse between the mother country and her colonies should not be placed under restraint; for every restriction, by shutting out men from some possible source of increased wealth, tends to the impoverishment of a country, and produces ill-will towards the possessor of the exclusive privilege. The monopoly of the markets of the American colonies was one main source of the grudge against Great Britain, which led to their declaration of independence. The preference still retained by England in the markets of her colonies is rather nominal than real, as she is now the cheapest manufacturing country in the world; but it is otherwise with the monopolies of sugar, coffee, and timber, which are preserved in her markets in favour of the colonies, and the continuance of which is, as already noticed, the cause of much dissatisfaction. The amount of indirect taxation on the British consumer, produced by the present discriminating duties in favour of these three descriptions of colonial produce, being estimated in the late Report on Import Duties at from £5,000,000 to £8,500,000.

The colonial expenditure of Great Britain, for civil, naval, and military purposes, after deducting repayments from colonial revenues, was, in the year 1835-36, the latest period for which it is shown in the public accounts (*Par. Paper*, 1840, No. 632), as follows:—*Military and Maritime Stations:* Gibraltar, £139,830; Malta, £110,818; Cape of Good Hope, £242,907; Mauritius, £78,284; Bermuda, £91,446; Fernando Po, £510; Ascension, £4907; Heligoland, £1016; Ionian Islands, £118,955; St Helena, £87,558. *Plantations and Settlements:* Jamaica, Bahamas, and Honduras, £232,428; Windward and Leeward Islands, including Trinidad and British Guiana, £373,242; Upper and Lower Canada, £221,441; Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland, £161,294;

Sierra Leone and Gambia, £38,347; Ceylon, £133,805; Western Australia, £12,745. *Penal Settlements:* New South Wales and Van Diemen's Land, £533,501; general charges, £23,449. Total, £2,606,483. This, however, is exclusive of the share of the pensions and other similar expenses fairly chargeable to the account of those establishments.

It does not fall within our plan to consider the much agitated questions as to the policy which a state should pursue in the formation of colonies, and in their government. On the former head, however, it may be observed that the recent policy of Great Britain has been to recognise the self-supporting system of emigration, first broached by Mr Wakefield in his "England and America," and afterwards developed by him in the Colonial Land Committee in 1836, namely, the plan of making unappropriated lands a fund for the free importation of labouring emigrants, and the importation of such emigrants the source of value to those lands, and an attraction for capitalists. [EMIGRATION.] This plan has been followed in South Australia, and in the settlement of New Zealand, the youngest of our colonies. As to government, the British colonies have, in general, local legislatures elected by the people, and a governor and council named by the crown; and in any changes which have recently taken place, an increased disposition has been shown to leave the internal arrangements to the colonists themselves.

A statistical and commercial description of the different colonies will be found under their respective heads, and a further account of their trade generally in the article COMMERCE.

COLOUR TRADE. The manufacture of painters' colours now forms an important branch of the national industry. The tedious and unwholesome process of grinding colours in oil, for house-painting, was formerly accomplished by the hand, and by painters for their own use; but of late the manufacturing chemists have been enabled, by the application of machinery, to supply the articles so cheaply, that the old method is almost entirely superseded. This improvement in the manufacture of colours has led to their now entering pretty largely into the list of exports. In the year 1839, the declared value of painters' colours exported was £236,482. The countries to which they are chiefly sent, are the United States, West Indies, and British America; considerable quantities are likewise shipped to Australia, India, Brazil, and the North of Europe.

The following is a table of the principal substances employed as paints and dyes and for other colouring purposes in the arts:—

TABLE of substances used for colouring, with their composition.

BLACK.	
Blacklead.	Native carburet of iron.
Blue black.	Charcoal.
Frankfort black.	From calcined lees of wine.
Ivory black.	Bone charcoal.
Indian Ink.	Lampblack, &c.
Lampblack.	Soot of resinous wood.
Marking Ink.	Nitrate of silver and soda.
Spanish black.	Charcoal from cork.
Writing Ink.	Gallosulphate of iron.
BLUE.	
Antwerp blue.	Ferro-sesqui-cyanuret of peroxide of iron and alum.
Blue ochre.	Subphosphate of iron and earthy matter.
Blue verditer.	Carbonate of copper and lime.
Cobalt blue.	Vitrified oxide of cobalt, silica, and potass.
Indigo.	From leaves of *Indigofera*.
Mountain blue.	Native carbonate of copper.
Prussian blue.	Ferro-sesqui-cyanuret of peroxide of iron.
Royal blue.	Same as cobalt blue.
Saxon or *Intense blue.*	Indigo dissolved in sulphuric acid.
Smalts.	Same as cobalt blue.
Ultramarine.	Silica, alumina, sulphur, and soda.
Ultramarine (French).	Ditto with iron.
Woad.	From plant *Isatis tinctoria*.
BROWN.	
Asphaltum.	Mineral resin.
Antwerp brown.	Ditto.
Bistre.	Burnt oil from soot of wood-fire.
Chesnut brown.	From the horse-chesnut.
Extract of Logwood.	From the *Hæmatoxylon Campechianum*.
Ivory brown.	Bones partially charred.
Mummy brown.	Mineral resin and animal matter.
Neutral tint.	Sepia, indigo, and madder.
Sepia.	From the cuttle-fish.
Sienna (Terra de).	Oxide of iron and earthy matter.
Sienna (Burnt).	Ditto, moderately calcined.
Spanish brown.	Oxide of iron and earthy matter.
Umber.	Oxides of manganese and iron, and earthy matter.
Umber (Burnt).	Ditto calcined.
Vandyke brown.	Peat, or bog earth.
GREEN.	
Brunswick green.	Preparation of copper.
Chrome green.	Protoxide of chromium.
Emerald green.	Arsenite of copper.
Mineral green.	Carbonate of copper.
Mountain green.	Native ditto.
Sap green.	From juice of buckthorn berries.
Scheeles green.	Arsenite of copper.
Verdigris.	Subacetate of copper.
ORANGE.	
Annatto.	From pods of *Bixa orellana*.
Orange vermilion.	Bisulphate and subsulphate of mercury.
Chrome orange.	Dechromate of lead.
Orange lead.	Proto and deuto oxides of lead.
Orpiment.	Sulphuret of arsenic.

PURPLE.

Carmine purple. Carmine partially charred.
Cassius purple. Oxide of gold and tin.
Litmus. From flower of *Lecomora tartarea.*
Logwood. From the tree *Hæmatoxylon Campechianum.*
Madder purple. From root of *Rubia tinctoria.*

RED.

Alkanet. Root of *Anchusa tinctoria.*
Carmine. From cochineal.
Chrome red. Dechromate of lead.
Cochineal. From the insect *coccus cacti.*
Cudbear or *Archil.* From the moss *Rocella tinctoria.*
Dragon's blood. A gum resin.
Indian red. Oxide of iron and earthy matter.
Intense scarlet. Peroidide of mercury.
Lac dye. From *Coccus lacca* insect.
Lakes. From Brazilwood, lac, &c.
Madder. From root *Rubia tinctoria.*
Peachwood. A species of Brazilwood.
Red lead. Deutoxide of lead.
Red ochre. Peroxide of iron and earthy matter.
Rouge. Safflower and French chalk.
Safflower. From flowers of the plant.
Venetian red. Oxide of iron and earthy matter.
Vermilion. Bisulphuret of mercury.
Vermilion (*Chinese*). Ditto of arsenic.

WHITE.

Ceruse white. Carbonate of lead.
Constant white. Carbonate and sulphate of barytes.
Flake. Sulphate of lead.
French white. Carbonate of lead.
London and Nottingham white. Ditto.
Pearl white (*true*). Pulverized pearls.
Ditto (*false*). Oxide of bismuth.
Roman white. Carbonate of lead.
Spanish white. Carbonate of lime and clay.
Tin white. Oxide of tin.
White chalk. Carbonate of lime.
White lead. Carbonate of lead.
Zinc white. Oxide of zinc.

YELLOW.

Brown ochre. Protoxide of iron and earthy matter.
Chrome yellow. Chromate of lead.
Dutch pink. Carbonate of lime and French berries.
French berries. Unripe berries of *Rhamnus infectoria.*
Fustic. From wood of a species of mulberry.
Gamboge. A gum resin.
Indian yellow. Uriophosphate of lime.
Lemon yellow. Chromate of baryta.
Madder yellow. From root of *Rubia tinctoria.*
Massicot. Protoxide of lead.
Naples yellow. A compound of the oxides of lead and antimony.
Orpiment or *King's yellow.* Sulphuret of arsenic.
Oxford ochre. Protoxide of iron and earthy matter.
Patent yellow. Chloride and oxide of lead.
Queen's yellow or *Turpeth mineral.* Subsulphate of mercury.
Quercitron. From bark of *Quercus tinctoria.*
Realgar. Protosulphuret of arsenic.
Roman ochre. Protoxide of iron and earthy matter.
Saffron. From flower of *Crocus sativa.*
Stone ochre. Protoxide of iron and earthy matter.
Sumach. From flower of *Rhus coriaria.*
Turmeric. From root of *Curcuma longa.*
Weld. From the plant *Reseda luteola.*
Yellow ochre. Protoxide of iron and earthy matter.

COLUMBO-ROOT. [Calumbo-Root.]

COMBS (Fr. *Peignes.* Ger. *Kamme.* It. *Peltini.* Por. *Pentes.* Sp. *Peines*), instruments for cleaning and adjusting the hair, the common kinds of which are formed of horn or bone, the finer generally of tortoise-shell. Combs are manufactured in most of our large towns.

COMMERCE is the interchange of commodities, whether manufactures or agricultural products, for money or for other commodities.

I.—Historical Summary.

The origin of commerce must be ascribed to the period when man first acquired the idea of property so perfectly as to be acquainted with the most simple of all contracts, that of exchanging by barter one rude commodity for another. The wants and ingenuity of his nature would then readily suggest to him a new method of increasing his enjoyments by disposing of what was superfluous in his own stores, in order to procure what was necessary or desirable in those of other men. A commercial intercourse would thus begin and gradually spread to neighbouring tribes; but no important interchange could take place between contiguous districts, whose soil and climate being nearly the same, would yield similar productions, and as remote countries could not carry on a very extensive intercourse by land, the progressive extension of commerce could take place only in those states that cultivated the art of navigation. The rude construction of vessels among the ancients, however, and their ignorance of the polarity of the magnet, rendered their maritime efforts timid, uncertain, and unimportant. The Egyptians, soon after the establishment of their monarchy (B. C. 2188), are said to have opened a trade between the Red Sea and India; but the Phœnicians were the first truly commercial people of whom we have any authentic record. The genius, policy, and laws of the Phœnicians were entirely commercial, and the trade carried on by them, especially at Tyre (*Ezekiel*, c. xxvii. B. C. 588) and Sidon, was more extensive than that of any other state in the ancient world. They were a nation of merchants who aimed at the empire of the sea, and actually possessed it. Their ships not only frequented all the ports of the Mediterranean, but visited the western coasts of Spain and Africa, in many of which places they founded colonies; while, through means of harbours possessed by them in the Red Sea, they established an intercourse with

Arabia, India, and the eastern coast of Africa. The vast wealth thus acquired by the Phœnicians incited in their neighbours the Jews, under the prosperous reigns of David and Solomon (B. C. 1014), a desire to be admitted to some share of the eastern trade; but the peculiar institutions of the Jews formed a national character incapable of that free intercourse with strangers which commerce requires. The Phœnicians, however, transmitted the commercial spirit in full vigour to their own descendants the Carthaginians, who (B. C. 263) pushed their navigation and discoveries towards the west and north, far beyond the views of the parent state, but do not seem to have aspired to any share of the commerce with India. The maritime power of the Phœnicians was annihilated by Alexander's conquest of Tyre in the year B. C. 332; and the empire of the Carthaginians was overturned by the Romans in the year B. C. 146.

Neither the Greeks nor the Romans imbibed the commercial enterprise which distinguished the Phœnicians and Carthaginians. Several of the Grecian states applied themselves to commerce with considerable success; but they hardly carried on any trade beyond the limits of the Mediterranean, and their chief intercourse was with their colonies in Asia Minor, Italy, and Sicily. The genius of Alexander, however, effected a revolution in commerce hardly inferior to that in empire, occasioned by the success of his arms. His expedition to the east, and the voyage of discovery accomplished under his auspices by Nearchus (B. C. 325) down the Indus, and along the Persian Gulf, considerably enlarged the sphere of geographical knowledge. The long and vigorous check also which he encountered from the republic of Tyre having afforded him an opportunity of observing the vast resources derived by it from trade, he was led to form the plan of rendering his dominions the centre of commerce as well as the seat of power. With this view he founded the city of Alexandria (B. C. 332) near one of the mouths of the Nile, that by its proximity to the Red Sea and the Mediterranean, it might command the trade both of the east and the west. This situation was chosen with such discernment, that Alexandria soon became the chief commercial entrepôt of the world; and amidst all the successive revolutions in those countries, commerce, particularly that of the east, continued, until the discovery of the Cape of Good Hope, to flow in the channel which the sagacity of the Macedonian had marked out for it.

The commerce of the Romans was still more inconsiderable than that of the Greeks. Their military education and the spirit of their laws concurred in estranging them from trade and navigation,—pursuits which would have been deemed a degradation of a Roman citizen; and the commerce of Greece, Egypt, and other conquered countries continued to be carried on in its usual channels after they became provinces of the western republic. The influence of Roman policy, however, appears upon the whole to have been favourable to commerce. "The union of nations," says Dr Robertson, "was never so entire, nor their intercourse so perfect, as within the bounds of this vast empire. Commerce under the Roman dominion was not obstructed by the jealousy of rival states, interrupted by frequent hostilities, or limited by partial restrictions. One superintending power moved and regulated the industry of mankind, and enjoyed the fruits of their joint efforts" (*History of America*). The chief progress made under the reigns of the emperors was in the commerce with India, from whence increasing supplies were imported for the use of the luxurious inhabitants of the capital. The course of the monsoons was then discovered, and vessels in pursuing this trade, instead of coasting along, boldly stretched across the Arabian Sea. The Indian trade, according to Pliny, drained the empire annually of more than £400,000; and Strabo states that 120 vessels sailed yearly from the Red Sea to India, chiefly to Musiris on the Malabar coast.

After the removal by Constantine of the seat of government to Constantinople (A. D. 330) the Roman empire became divided and its force weakened, and it was finally overturned (A. D. 476) by barbarous invaders from various quarters. These parcelled out Europe into many small and independent states, which, occupied by such inhabitants, may be said to have returned to a second infancy. The names of stranger and enemy became once more words of the same import, and commercial intercourse with distant nations would have nearly ceased had not Constantinople escaped the destructive rage of the barbarians. In that city the knowledge of ancient arts was preserved, the luxuries of foreign countries were in request, and commerce continued to flourish when it was almost extinct in every other part of Europe.

The first symptoms of revival from this torpid and inactive state were discerned in Italy, where various causes concurred in restoring liberty and independence to the cities. Constantinople was at first the chief mart to which the Italians resorted, but the cheaper rate at which eastern commodities were to be obtained at Alexandria (then in possession of the Soldans of Egypt) soon led to their resorting to that place, notwithstanding the violent animosities which existed between Christians and Mohammedans. The Italians, by distributing their wares over Europe, began to impart to its various nations some taste for the productions of the East, as well as some ideas of arts and manufactures. The Crusades (1099—1249), by leading multitudes from every quarter of Europe into Asia, opened a still more extensive communication between the east and the west, the means of which were chiefly supplied by Genoa, Pisa, and particularly by Venice, which, before the termination of the Holy War, became a great maritime state, possessing an extensive commerce and ample territories. A further acquaintance with the commercial resources of the East was obtained by means of the travels of Marco Polo, a Venetian (1295), and others. The mariner's compass was discovered about 1302, but the art of steering by it was acquired slowly. The Portuguese and Spaniards were the first who under its guidance attempted the navigation of unknown seas. The former, step by step, explored the coast of Africa, and in 1497 discovered the passage to India by the Cape of Good Hope. About the same time (1492) America was discovered by Columbus. The influence of these discoveries upon commerce and navigation is noticed under other heads. [COLONY. EAST INDIA COMPANY.]

The extension of trade in the north of Europe led, about the year 1241, to the famous Hanseatic league [HANSE TOWNS], the members of which formed the first systematic plan of commerce known in the middle ages. The Hanse Towns, which attained their greatest power in the 15th and 16th centuries, traded extensively with the Lombards, exchanging naval stores and other bulky articles of the north for the productions of India and the manufactures of Italy. The city of Bruges in Flanders became the centre of communication between the Hanseatic and Lombard merchants, and rose in consequence to be the principal emporium in Europe, while habits of industry spread throughout the adjacent districts. Flanders and the contiguous provinces thereby became distinguished above all other countries for manufactures, skill, and opulence. The prosperity of those districts was at its height (1567) when the religious persecutions of the Duke of Alva and others drove multitudes of its most skilful artisans to other countries. The tyrannical conduct of the Spaniards, however, although ruinous to Flanders, was productive of benefit to the neighbouring country of Holland, to which, before the expiry of the 16th century, nearly the whole commerce of Bruges, Antwerp, and other Flemish cities was transferred. Holland thenceforth rose to be the first commercial state. Her greatness was owing to her favourable situation, the superior industry and economy of her inhabitants, the comparatively enlightened principles of her laws, and the disturbance prevailing in other countries, all which contributed to render her the carrier of Europe. Her commerce was greatest from 1650 to 1670, during which period her external trade and navigation surpassed those of all Europe besides. Her subsequent decline is to be attributed partly to the natural progress and rivalry of other states, particularly England, but mainly to the heavy taxation with which the inhabitants were burdened, in consequence of the expenses attending the wars with Spain, France, and England, and the low rate of profit which was produced by this circumstance, and the excessive accumulation of capital. Notwithstanding all the changes, however, which Holland has undergone, it continues, though not larger than Wales, and naturally not more fertile, to be the richest and most industrious of all the states on the continent of Europe.

In England, besides the common obstructions of commerce occasioned by the nature of the feudal government, and the state of manners during the middle ages, its progress was retarded by peculiar causes. The divided state of the kingdom during the Saxon heptarchy,—the revolution of property occasioned by the Norman conquest,—the long-continued wars in support of the pretensions of her sovereigns to the throne of France,—and the destructive contests between the houses of York and Lancaster, successively checked the growth of industrious habits, and rendered the people unfit for the pursuit of any system of useful policy. The English were accordingly one of the last nations in Europe who availed themselves of those commercial advantages which were natural or peculiar to their country. Before the reign of Edward II. all their wool, except a small quantity wrought into coarse cloths for home consumption, was sold to the Flemings and Lombards, and manufactured by them; and though that monarch, in 1326, began to allure some of the Flemish weavers to settle in his kingdom, it was long before his subjects were capable of fabricating cloth for foreign markets, and the export of wool continued to be the chief article of their commerce. All foreign commodities were brought to them by the Lombard and Hanseatic merchants. The first commercial treaty of England on record was that with Haguin king of Norway, in 1217. But the English did not venture to trade in their own ships to the Baltic until the beginning of the 14th century: it was after the middle of the 15th ere they sent any ship into the Mediterranean; nor was it long before this period that they began to visit the ports of Spain or Portugal.

The accession of Henry VII. terminated the civil wars of York and Lancaster, and his vigorous and prudent administration (1485—1509) forms an important era in the history of English commerce. He maintained peace, facilitated commercial enterprise by negotiating treaties, modified the powers of corporations, and provided for uniformity in weights and measures; while, by subverting the feudal system and establishing the authority of the law, he increased the numbers of the industrious classes, elevated their condition, and rendered their property secure. Henry VIII., though he degraded the coinage, was likewise disposed to facilitate commerce; and he may be styled the founder of the Royal Navy and of the Trinity House. The Reformation, which occurred in his reign, communicated a prodigious impulse to the minds of the people, and their energies being now roused, an increased desire was felt to emulate the Spaniards and Portuguese in discovery with a view to trade. During this period the expeditions of Willoughby and Chancelor took place. Henry's successor, Mary, having espoused Philip of Spain, discountenanced all projects that might have brought England into collision with that country. But the disposition for adventure was revived during the vigorous sway of Elizabeth; and the struggle with the Spanish Armada, and the expeditions under Drake, Raleigh, Hawkins, Cavendish, and others, developed and confirmed the national taste for maritime enterprise. The East India Company was chartered by Elizabeth in the year 1600; settlements were about the same time made in the East Indies; but it was not until the reign of James I. that colonies were permanently established in North America.

The reigns of Elizabeth, James I., and Charles I. formed the era of monopolies and exclusive grants. Under Cromwell many of these were abrogated; but it was during his protectorate that the foundation was laid of our NAVIGATION LAWS, a system perfected in the next reign by the 12th Charles II. c. 18. In this reign also, government unfortunately lent itself to the urgency of our manufacturers so far as to impose heavy duties upon foreign goods, particularly in 1678 on French commodities, a course followed with increased rigour after the Revolution of 1688 and the ensuing war; national animosity concurring with the belief that our interests called on us to discourage the use of foreign articles. Bounties were at the same time granted on the exportation of many kinds of English goods. This was the beginning of what is designated by political economists the *Mercantile System*, a fuller explanation of which is given elsewhere. [BALANCE OF TRADE. BOUNTY. MERCANTILE SYSTEM.]

The confidence inspired by the government of the Revolution, and the now increased wealth of the country, gave life and expansion to public credit, developing almost simultaneously, however, its abuses as well as its advantages. The Funding System was introduced at that time; in 1693, the Bank of England was established, and in 1695, the Bank of Scotland; events which were shortly followed in the latter country by ill-fated colonial schemes (1695), and in the former by the South Sea Bubble (1720). But notwithstanding these reverses, and the increased burdens produced by two great wars (1701—1713 and 1739—1748), the industry and wealth of the country steadily advanced; and by 1750 the mercantile navy had increased from 270,000 tons, its amount at the beginning of the century, to upwards of 600,000 tons; Great Britain now taking the lead as the first commercial state.

The progress made by this country during the latter half of the 18th century was still more considerable, although interrupted in its first portion by the seven years' war (1756—1763), and afterwards by the insurrection of our American colonies, which began in 1775, and in 1778 extended to a struggle with France, Spain, and eventually Holland,—an arduous and expensive contest, from which this country was relieved by the peace of 1783, when these colonies were separated from the mother country. The people, however, soon recovered from the apprehension of loss of power caused by this separation; our town population increased, and our manufactures extended, favoured as they now were by the easy conveyance of fuel and bulky goods by canals, which about this period were generally formed throughout the kingdom. Country banking also was extended without being abused, while at the same time the public revenue increased slowly but progressively. The chief branch of manufacture in England had formerly been that of woollens, and in Scotland that of linens; but the discoveries of Hargreaves, Arkwright, Watt, and others in this period, gave an entirely new aspect to the industry of the country, particularly as regards the importance communicated to all branches of the hardware trade, and the development of the cotton manufacture, which henceforward became the great staple of both parts of the island. The impulse thus communicated led to an extraordinary increase of our shipping, which, by the end of the century, amounted to about 1,600,000 tons, having thus been nearly tripled since 1750.

II.—Progress of British Commerce from 1793 to 1841.

The indications of prosperity alluded to in the latter part of the preceding section were suspended by the war of the French Revolution, which began in 1793, and was for some time productive of great commercial distress, but assumed a very different appearance after the extended circulation of bank paper in 1797, and seemed to bring a yearly addition to the national wealth. This ostensible prosperity continued during the principal part of the war. The transition to peace, however, produced a fall of prices in every department of business, and the year 1816 was among the most gloomy in our commercial history. A revival took place in 1817 and 1818, also in 1823. The year 1824 was a period of prosperity, but it was followed by excitement and overtrading, which resulted, in the end of 1825, in a commercial pressure and revulsion of almost unprecedented severity. A somewhat similar alternation of prosperity and distress again occurred in the years 1836 and 1837 respectively; and since then our commerce has been almost uniformly in a depressed state.

The limits of the present article do not admit of our considering in detail the progress of trade during the extraordinary period that has elapsed since 1793; but the following table contains a digest of the principal events that occurred; appended to which is an abstract of the yearly amount of our imports and exports since 1800, when the legislative union took place between Great Britain and Ireland.

Chronological Summary of the principal Events affecting British Commerce from 1793 to 1841.

1793. War declared by France against Great Britain.

1797. February 26. Order in Council prohibiting the Bank of England from paying their notes in specie,—a measure shortly afterwards ratified by the *Bank Restriction Act.*

1800. A series of deficient harvests began in 1795, which were aggravated to dearth in this year and 1801.

1801. October 1. Suspension of hostilities with France; followed by Peace of Amiens in 1802.

1803. May 21. War again broke out between France and Great Britain.

—— The *Warehousing System* introduced (43 Geo. III. c. 132).

1805. The commerce with the United States now rises into great importance; in this and the two following years, nearly one-third of our foreign export trade being carried on with them. In this period the merchants of the United States were accustomed to sell their produce in the Continental markets to a much greater amount than their purchases in these markets; while in their dealing with this country, they had every year a large balance to pay to it. The means of liquidating this balance were furnished by the excess of their Continental sales, the amount of which was paid to the agents of the British government for bills upon the Treasury, which came as a remittance to our exporting merchants, and thus were funds placed at the disposal of our armies, and provided for the payment of subsidies.

1806. Steam navigation established by Fulton in the United States, on the river Hudson, between New York and Albany.

—— November 21. Bonaparte issued his *Berlin Decree*, whereby he declared all the ports of Great Britain in a state of blockade, and forbade all trading with us, or in the articles of our produce and manufactures, declaring such to be liable to seizure and condemnation, and forbidding the importation into the countries under his control, which then included nearly all continental Europe, of any goods of such kinds as were included among the home or colonial productions of this country, unless they should be accompanied by certificates, showing their origin to have been other than British: this was the commencement of what is sometimes called the *Continental System.*

1807. March. Slave-trade abolished by Great Britain.

—— November 11. British *Orders in Council* issued, declaring, as the only condition upon which neutrals might trade with countries not at peace with Great Britain, that the vessels in which that trade was carried on should touch at some port in this country, there to pay such amount of customs duties as should be imposed by the British government; and any vessel found to have on board the certificate of origin required by the French government was declared lawful prize.

—— The government of the United States, finding its flag was excluded from the Continent by the Berlin Decree and the Orders in Council, interdicts altogether the trade of its subjects with either of the belligerents: first (December 22), by blockading its own ports; and next (1809, May 20), by a law forbidding intercourse with the belligerents.

1807. December 27. Bonaparte issued his *Milan Decree*, declaring that any ship that should have paid any tax to the British government, or that had submitted to be searched by any British authorities, was thereby *denationalized*, and became a good and lawful prize.

1808. The East India Company begin to grant licenses to the owners of Indian vessels to trade between India and China.

1810. February 19. Treaty of commerce and navigation between Great Britain and Portugal.

—— The House of Commons appoint *The Bullion Committee* to inquire into the difference in value of Bank of England notes and gold, whose report is presented to parliament in June.

—— Harvest greatly deficient.

1811. March 2. The United States pass another non-intercourse act against Great Britain; the former having been repealed by a law of 1st May 1810.

—— Steam navigation introduced into the United Kingdom; the first vessel worked for hire being the Comet, of three horse power, which plied on the Clyde.

1812. June 4, 17. War declared against Great Britain by the Congress of the United States.

1813. The East India Company's charter renewed for 20 years, from April 22, 1814 (53 Geo. III. c. 155), when the trade with India was thrown open to the British public.

—— October 16-19. The battle of Leipsig, an event followed by the opening of the principal ports on the continent of Europe to the trade of Great Britain.

1814. May 30. Peace between Great Britain and France; which, however, was interrupted for a short period (March—July) in the following year, by the return of Bonaparte.

—— December 24. Peace of Ghent between Great Britain and the United States.

1815. July 3. Treaty of commerce between Great Britain and the United States.

1816. New silver coinage (56 Geo. III. c. 68), and the Mint standard of silver raised from 5s. 2d. to 5s. 6d. per ounce.

—— September 26. Treaty of commerce and navigation between Great Britain and the Two Sicilies.

—— Deficient harvest followed by large importations of foreign corn.

1819. The statute 59 Geo. III. c. 49 (*Mr Peel's Act*), passed, providing for the gradual resumption of specie payments by the Bank of England.

1820. February 1. The Bank of England commences to exchange its paper for bullion.

1821. May 1. The Bank of England recommences payment of its notes in current gold coin.

1822. Various relaxations of our navigation laws effected by five acts (3 Geo. IV. c. 41, 42, 43, 44, and 45), introduced by Mr (afterwards Lord) Wallace, then President of the Board of Trade.

1823. October 30. The British government sends consuls to the new states of South America.

1824. April 2. Treaty of commerce between Great Britain and Prussia.

—— June 16. Commercial treaty between Great Britain and Denmark.

1824. March 17. Treaty between Great Britain and the Netherlands respecting their East Indian commerce and territories.

—— The navigation laws further relaxed by the introduction, by Mr Huskisson, of *The Reciprocity System* (4 Geo. IV. c. 77, and 5 Geo. IV. c. 1), a measure which had become expedient in consequence of the attitude assumed by Prussia.

—— Institution of joint-stock banks in Ireland.

1825. January 1. Mr Canning announces the intention of the British government to negotiate treaties of commerce with the new South American states, upon the basis of the recognition of their independence respectively: this is shortly afterwards carried into effect with the states of the Rio de la Plata, Colombia, Mexico, and the others.

—— February 7. Treaty between Great Britain and Russia, regulating the intercourse between their possessions on the north-west coast of America.

—— September 29. Treaty of commerce and navigation between Great Britain and the Hanse Towns.

—— Great commercial excitement throughout the kingdom, and numerous joint-stock companies associated for banking, insurance, and other purposes, including about seventy associations for the working of the South American mines, nearly the whole of which proved ruinous to the adventurers.

—— December 12. General commercial panic commenced by the failure in London of the banking-house of Pole & Co.

1826. January 1. The *Imperial System* of weights and measures came into operation.

—— January 5. Currency of Ireland assimilated to that of Britain.

—— January 26. Treaty of commerce between Great Britain and France.

—— July 5. Repeal of system of prohibition against the importation of foreign manufactured silk goods, effected by the introduction of a modified scale of duties, to be in operation after this date.

—— Branch banks first established by the Bank of England.

—— Joint-stock banks allowed to be established in all parts of England, except the metropolitan district.

1827. A new registry act for shipping, 6 Geo. IV. c. 110 (now superseded by 3 & 4 Wm. IV. c. 55) came into operation.

1828. May 13. The United States tariff bill, imposing prohibitory duties on many principal articles of British manufacture, passes the American senate.

—— Deficient harvest followed by large importations of foreign corn.

1829. December 21. Treaty of commerce and navigation between Great Britain and Austria.

1830. September 15. Opening of the Liverpool and Manchester railway: the mail was first sent by it on the 11th November following.

—— October 10. Duties on ale and beer ceased from this date.

—— Bounties on linen and all other articles ceased.

1833. March. Modification of the American tariff; chiefly in consequence of the hostile attitude of South Carolina.

—— August 29. The charter of the Bank of England renewed by the act 3 & 4 Wm. IV. c. 98.

—— Relaxation of the usury laws in favour of bills of exchange.

1834. The Prussian commercial union comes into practical operation.

—— April 30. The East India Company prohibited from trading after this date, when their charter expired.

—— August 1. Emancipation of the negro slaves in the British colonies,—an indemnity of £20,000,000 being granted to their owners by parliament.

1836. Great commercial excitement throughout this country and the United States.

1837. May. A total derangement of commercial affairs in the United States; all their banks suspend specie payments; and very extensive failures occur, the effect of which is felt to a considerable extent in Great Britain, especially in the manufacturing districts.

—— November. Insurrection in Canada.

1838. Colony of South Australia established.

—— April 8. The Great Western steam-ship sailed from Bristol to New York, where she arrived April 23. This voyage established the practicability of the steam-navigation of the Atlantic.

—— April 16. War between France and Mexico, and the Mexican ports blockaded; terminated March 9, 1839, through the mediation of Great Britain.

1838. July 3. Treaty of commerce with Austria; and with Turkey, November 16.

—— Deficient harvest, followed by extensive importations of foreign corn, an adverse state of the exchanges, and considerable pressure in London and other districts.

1839. April 15. The Chinese arrest the British superintendent at Canton, Captain Elliot, and several merchants, who are compelled to deliver up (May 30) opium to the amount of £3,000,000.

—— November 24. The trade between Great Britain and China stopped by order of Lin, the imperial commissioner.

1840. January 10. The uniform Penny Postage commenced on all letters not exceeding half an ounce in weight, between places in the United Kingdom.

—— May 15. An addition of 5 per cent. to be levied, after this date, on all customs and excise duties, except on spirits (which pay an additional 4d. per gallon), corn imported, horses let on hire, &c.

—— May 21. The islands of New Zealand proclaimed to be British territory.

—— June 28. Blockade of the river and harbour of Canton by the British.

—— November 16. Treaty of commerce between Great Britain and Texas.

STATEMENT of the Amount of the Foreign and Colonial Trade of the United Kingdom, in each year from 1801 to 1839:—

Years.	Official Value.			Real or Declared Value of British and Irish Produce and Manufactures exported.		
	Imports of Foreign and Colonial Merchandise.	Exports of Foreign and Colonial Merchandise.	Exports of British and Irish Produce and Manufactures.	Europe.	Other Places.	Total.
	£	£	£	£	£	£
1801....	31,786,262	10,336,966	24,927,684	....	....	39,730,659*
1802....	29,826,210	12,677,431	25,632,549	....	....	45,102,330*
1803....	26,622,696	8,032,643	20,467,531	....	....	36,127,787*
1804....	27,819,552	8,938,741	22,687,309	....	....	37,135,746*
1805....	28,561,270	7,643,120	23,376,941	13,625,676	24,451,468	38,077,144
1806....	26,899,658	7,717,555	25,861,879	11,363,635	29,511,348	40,874,983
1807....	26,734,425	7,624,312	23,391,214	9,002,237	28,243,640	37,245,877
1808....	26,795,540	5,776,775	24,611,215	9,016,033	28,259,069	37,275,102
1809....	31,750,557	12,750,358	33,542,274	15,849,449	31,521,944	47,371,393
1810....	39,301,612	9,357,435	34,061,901	15,627,806	32,810,874	48,438,680
1811....	26,510,186	6,117,720	22,681,400	12,834,690	20,056,032	32,890,712
1812....	26,163,431	9,533,065	29,508,508	....	....	41,716,964
1813....	Records destroyed by fire.			....	....	....
1814....	33,755,264	19,365,981	34,207,253	26,869,591	18,624,628	45,494,219
1815....	32,987,396	15,748,554	42,875,996	20,736,244	30,866,784	51,603,028
1816....	27,431,604	13,480,780	35,717,070	18,653,555	23,004,318	41,657,873
1817....	30,834,299	10,292,684	40,111,427	19,093,574	22,667,558	41,761,132
1818....	36,885,182	10,859,817	42,700,521	19,439,382	27,163,867	46,603,249
1819....	30,776,810	9,904,813	33,534,176	16,790,652	18,417,669	35,208,321
1820....	32,438,650	10,555,912	38,395,625	18,429,503	17,995,149	36,424,652
1821....	30,792,760	10,629,689	40,831,744	15,903,442	20,756,188	36,659,630
1822....	30,500,094	9,227,589	44,236,533	16,601,562	20,367,402	36,968,964
1823....	35,798,707	8,603,904	43,804,372	14,857,128	20,600,920	35,458,048
1824....	37,552,935	10,204,785	48,735,551	15,698,940	24,697,360	40,396,300
1825....	44,137,482	9,169,494	47,166,020	14,646,358	24,231,030	38,877,388
1826....	37,686,113	10,076,286	40,965,735	13,893,270	17,643,453	31,536,723
1827....	44,887,774	9,830,728	52,219,280	14,478,964	22,702,371	37,181,335
1828....	45,028,805	9,946,545	52,797,455	13,775,870	23,036,886	36,812,756
1829....	43,981,317	10,622,402	56,213,041	14,545,474	21,297,149	35,842,623
1830....	46,245,241	8,550,437	61,140,864	15,610,638	22,660,959	38,271,597
1831....	49,713,889	10,745,071	60,683,933	13,550,440	23,613,932	37,164,372
1832....	44,586,741	11,044,869	65,026,702	15,584,006	20,866,588	36,450,594
1833....	45,952,551	9,833,753	69,989,339	15,611,789	24,055,558	39,667,347
1834....	49,362,811	11,562,036	73,831,550	18,007,033	23,642,158	41,649,191
1835....	48,911,542	12,797,724	78,376,731	18,464,433	28,907,837	47,372,270
1836....	57,023,867	12,391,711	85,229,837	19,011,066	34,357,505	53,368,571
1837....	54,737,301	13,233,622	72,548,047	19,071,303	22,999,441	42,070,744
1838....	61,268,320	12,711,318	92,459,231	21,711,295	28,349,675	50,060,970
1839....	62,004,000	12,795,990	97,402,726	20,414,520	32,819,060	53,233,580

* These apply to Great Britain only: the exports from Ireland are, however, inconsiderable.

The *official value* stated in the preceding table is rated according to a scale established so far back as 1696, when prices were altogether different from what they are at present; but the system has been preserved in the public accounts without alteration, because it is supposed to afford a correct measure of the comparative quantity of merchandise which has made up the sum of our imports and exports. On the other hand, the *real* or *declared value* is estimated at the market price, agreeably to the sums declared by the exporting merchants; this latter method, however, is only applied to the exports of the produce and manufactures of the United Kingdom.

If the progress of our foreign commerce be measured according to the official valuation, it appears that the increase since the commencement of the century has been very great; the amount of exports of British produce and manufactures within this period having indeed been nearly tripled. But if the declared value is to be assumed as the test of these last, it will be seen that little or no progress has been made,—that in fact, if one or two late years are excepted, the amount of our foreign trade has not been equal to that which was carried on during some of the years when we were at war with nearly all Europe, nor to that of the first five years of peace that followed. A still less flattering aspect is presented by that part of our commerce which, being carried on with the rich and civilized inhabitants of European nations, should present the greatest field of extension,—more especially when we look to the change which has of late taken place in the nature of our exports to those countries. This is shown in the following table prepared by Mr Porter, of the Statistical Department of the Board of Trade (*Par. Report on Import Duties*, 1840, No. 601), and which exhibits facts of the utmost importance to the general interests of the country.

TABLE showing the value of British Produce and Manufactures exported to various districts or quarters of the world in 1827 and 1838, distinguishing finished manufactures and goods into the value of which much labour has entered, from materials of manufacture, and goods upon which but little labour has been bestowed; showing also the centesimal proportions of each of these two descriptions:—

	1827.				1838.			
	Goods into the Value of which has entered		Centesimal Proportion of Column Number		Goods into the Value of which has entered		Centesimal Proportion of Column Number	
	Much Labour.	Little Labour.			Much Labour.	Little Labour.		
	1.	2.	1.	2.	1.	2.	1.	2.
	£	£			£	£		
Russia, Sweden, Norway, & Denmark.....	498,437	1,101,309	31·15	68·85	422,081	1,602,698	20·84	79·16
Prussia, Germany, Holland & Belgium......	4,773,648	2,159,869	68·84	31·16	4,193,921	5,567,641	42·96	57·04
Southern Europe.......	4,987,269	958,432	83·88	16·12	7,493,907	2,619,397	74·09	25·91
Cape of Good Hope....	196,968	19,590	90·95	9·05	576,555	46,768	92·49	7·51
Mauritius............	173,874	21,839	88·84	11·16	414,240	53,102	88·63	11·37
Other parts of Africa...	224,378	34,839	86·56	13·44	689,964	67,130	91·13	8·67
Asia..................	3,812,199	647,123	85·48	14·52	4,508,077	1,110,879	80·23	19·77
Australia.............	295,424	44,706	86·85	13·15	1,198,900	137,762	89·69	10·31
British North American Colonies............	1,159,340	238,010	82·96	17·04	1,745,833	246,624	87·62	12·38
British West Indies....	2,927,228	655,994	81·69	18·31	2,916,129	477,312	85·93	14·07
Foreign West Indies....	860,723	46,586	94·86	5·14	1,222,326	93,205	92·91	7·09
United States of America	6,725,676	292,596	95·83	4·17	6,782,077	803,683	89·40	10·60
Brazil................	2,137,111	174,998	92·43	7·57	2,420,806	185,798	92·87	7·13
Other parts of S. America & Mexico.......	1,648,936	43,274	97·44	2·56	2,072,821	47,480	97·75	2·25
Guernsey, Jersey, Alderney, & Man.........	275,265	45,694	85·76	14·24	288,059	55,795	83·77	16·23
Total .	30,696,476	6,484,859	82·56	17·44	36,945,696	13,115,274	73·80	26·20

Comparing 1827 with 1838, it appears, that the proportion of fully manufactured goods exported in the former year was . . . . . 82·56 per cent.
In the latter year, ... 73·80 ...

If the shipments to British colonies and dependencies are separated from those to foreign countries, it appears that the proportionate value of the aggregate shipments in those two years was nearly the same, viz.:—

	Centesimal Proportions.	
1827, Value of Shipments to Colonies . .	28·27	
.... to Foreign Countries .	71·73	
		100
1838, Value of Shipments to Colonies	27·52	
.... to Foreign Countries .	72·48	
		100

But if those values are separated according to the degree of labour bestowed, it will be found that the proportions are,

		Much Labour.	Little Labour.	
Colonies .	1827 . .	84·09 .	15·91 .	100
....	1838 .	84·55 . .	15·45 .	100
Foreign Countries	1827 .	. 81·95 .	. 18·05 .	100
......	1838 .	69·72 . .	30·28 .	100

Separating further the shipments to Northern Europe, it will be found that the proportions are,

	1827.	1838.
Much labour . .	61·78	39·16
Little labour . .	38·22 . .	60·84
	100 -	100 -

The actual amount of Shipments in 1827 and 1838 to British Colonies, to Foreign Countries generally, and to Northern Europe, was as follows :—

	1827.			1838.		
	Much Labour.	Little Labour.	Total.	Much Labour.	Little Labour.	Total.
	£	£	£	£	£	£
To British Colonies.........	8,840,268	1,672,956	10,513,224	11,647,793	2,128,242	13,776,035
To Foreign Countries generally..................	21,856,208	4,811,903	26,668,111	25,297,903	10,987,032	36,284,935
	30,696,476	6,484,859	37,181,335	36,945,696	13,115,274	50,060,970
To Northern Europe........	5,272,085	3,261,178	8,533,263	4,616,002	7,170,339	11,786,341

These results afford strong evidence of the unsatisfactory footing upon which our trading relations with the nations of Europe are established. These countries, particularly those of the North of Europe, which now take a diminished proportion of our more highly manufactured commodities, possess an abundance of productions suited to our wants, which they are naturally desirous of exchanging for the products of our looms and our mines ; but by our imposing high duties upon corn and timber, the principal articles they have to give us in exchange, they have, in order to employ their own population, been driven to manufacture for themselves ; "and now," as the President of the Manchester Chamber of Commerce lately remarked, "we have rivals where we should otherwise have had customers." Similar impediments exist to the extension of our intercourse with other countries, arising, however, no less from the anti-commercial system of legislation of the governments of those countries than of our own. In the report lately presented to the House of Commons by the Committee on Import Duties, the progress of manufactures throughout Europe, the growing competition with which our merchants have now to contend in foreign markets, and the consequent necessity of releasing their goods as much as possible from the unequal burden of our taxation, are very fully explained. It is shown clearly that the complicated system of our duties tends, among its other evils, to derange the natural course of trade, and to place under particular disadvantages our manufacturers who go abroad in quest of a market. An account of the remedies suggested in this report is given in the article TARIFF, to which head we likewise refer for other details relating to the present condition of our foreign commerce.

III.—PRINCIPLES OF COMMERCE.

These may be partly inferred from what has been already stated. Commerce is only productive of wealth in an indirect manner. The merchant produces no alteration on the articles which he buys and sells : he merely exchanges one commodity for another ; and in general, what is given is the exact equivalent of what is received. The advantage of commerce—and it is difficult to overestimate its importance—consists in the uninterrupted scope and efficiency which it gives to the division and distribution of labour, by placing it in the power of individuals to prosecute continuously such employments as suit their taste or capacities. The intervention of the commercial class gives continuous motion to the national industry. They collect together every variety of commodities in warehouses and shops, and enable individuals, without loss of time, to supply themselves with whatever they want. Without the assistance of the merchant, it would not be possible to confine ourselves to one branch of industry, and all the advantages of co-operation and combination would be lost. Commerce, besides, is eminently conducive to the wealth and prosperity of a country, by balancing what is deficient in one district with what is superfluous in another; and by enabling it to import the commodities for the production of which the soil, climate, capital, and industry of foreign countries are best calculated, and to export in payment those articles for which its own situation is better adapted. By this distribution of the various articles suited to the accommodation of man in different and distant regions, or, as it may be described, this *territorial division of labour*, Providence has, by a beautiful arrangement, and one which will probably lead to the general civilisation of the world, provided for the mutual dependence of individuals and nations, and made even their selfish pursuits subservient to the general good.

In order that each community may avail itself to the uttermost of its peculiar means of production, it is essential that commercial intercourse should be free and unrestricted. Respecting the freedom of the home trade, or that between different parts or provinces of the same country, no difference of opinion is now entertained. Without this freedom there would have been little or no wealth, only a limited population, and that population rude and barbarous. But although foreign trade is to all the countries in the world merely what home trade is to the different provinces of the same country, it is contended that it should be regulated in a different manner. It is alleged that the importation of foreign commodities prevents the employment of so much native industry as would be required to fabricate these goods, or some substitutes for them, at home; and that this injury is in no degree compensated by the comparative cheapness of the foreign commodities to the consumer.

In this argument the attention is confined to the effect of the importation of the superior foreign article on those persons in the importing country who are already engaged, or would, but for such importation, engage themselves in the manufacture of the commodity in question, or its substitute. It is altogether overlooked that the importation is only an exchange of some product of home industry for some other of foreign industry; that the equivalents of the foreign commodities must be first produced here, and then exported in exchange for them, or their introduction would be impossible; for assuredly foreigners never send us their goods except in return for an equivalent, and we can of course export nothing which is not the produce of British industry. Every obstacle, therefore, to the importation of any foreign commodity is precisely to the same extent an obstacle to the exportation of an equivalent of British produce or manufacture. And the injury sustained by the consumers of the protected articles from their higher price or inferior quality, is uncompensated by the advantage derived by any other class; the effect of all protecting duties being to diminish the general productiveness of the national industry, by confining it to such employments as are less productive of value than those which without such interference would be undertaken. Hence, in all cases where high duties are imposed to afford protection, foreign commerce must in the nature of things be diminished to a greater extent than domestic industry is encouraged.

The principle of free trade, however, is opposed by many in this country who do not attempt to deny the axiom, that every importation causes a correspondent exportation, on the following grounds:—

1. "The producers of such a highly taxed country as Great Britain ought to be protected from the competition of comparatively untaxed foreigners."

If the taxes are levied equitably, it is obvious that the producer of the commodity which would be exported in exchange for that which is imported, is as much burdened as the producer of the article which the latter would supersede. If, on the other hand, the taxes are not levied equitably, the remedy is to equalise them, not to make the imposition of one injustice the defence for another.

2. "A country loses by the importation of the goods of another, unless there is a *reciprocity* in the free admission of her goods, on the same terms, into the latter."

If Prussia sends goods into England, while the admission of goods from England into Prussia are prohibited, and the goods received by England are paid in specie, it is obvious, that in order to render it profitable for an English merchant to export specie in exchange for Prussian goods, he or some other merchant must find it profitable to import an equal quantity of it in exchange for goods of home production, from Mexico, Peru, or some other country into which British goods find their way. If this quantity of specie could not be bought somewhere with English goods, its exportation to Prussia would speedily raise its value in this country so high, that it would no longer be profitable to export it in exchange for Prussian commodities. The whole may be regarded as one transaction. The merchants of England, as a body, could not find it profitable to export specie for goods, unless it were equally profitable to purchase specie with goods. It is well known, however, that in fact very little gold or silver is employed for such purposes. [BALANCE OF TRADE. EXCHANGE.] If England imports from Prussia more goods than it sends thither, Prussia is mostly paid by goods sent from other countries which receive from England more than they send, and their mutual balances are adjusted by the circulation of bills of exchange. Any obstacle, therefore, to the interchange of goods between one country and another, is as injurious to that imposing the restriction as to that on whose productions the restrictive duty is imposed; every tax upon importation acting to the same extent as a tax upon exportation. If France excludes our iron and yarns, she suffers from such policy quite as much as this country. In whichever of two countries the restriction is imposed, there is sure to be a reciprocity of injury; and the benefit of every relaxation, from whichever it proceeds, is sure to be enjoyed by both.

3. "It is the policy of a nation to be independent of foreign supplies, in case it may be deprived of such supplies by *war*."

This policy is false in principle and ruinous in practice. In the fear of war a system would be maintained, the tendency of which is to perpetuate war. More quarrels have been engendered by the commercial system of exclusion than by all the other follies and passions of subjects and rulers. The best way to preserve the nations of the earth in peace, is to let them prove how dependent each is upon the others for the profitable employment of its people, and for the comforts resulting from that profitable employment.

The system of protection was introduced into European policy in 1667 by M. Colbert, minister to Louis XIV. of France, and it has been since steadily acted upon by almost all nations, on the mistaken notion which has been generally entertained, that the protection of trade was a necessary part of the duty of the executive government; and there are few political errors which have occasioned greater mischief. The regulating mania which it inspired has tormented industry in a thousand ways to force it from its natural channels. Besides falsely teaching nations to regard the welfare of their neighbours as incompatible with their own, it has fostered a spirit of conspiracy of class against class, and interest against interest,—every one trying to gain legislative favour at the expense of the rest. The prices of most articles have been artificially enhanced by protective duties or legislative monopolies. By this system of each robbing each, all parties have been losers, and the sum of national wealth has been proportionally lessened.

The policy of abandoning the restrictive system was long regarded with jealousy by the commercial classes; but juster and more liberal opinions now prevail. In the year 1820, many of the principal mercantile houses in London joined in a petition to Parliament, embodying the substance of all the principles of free trade which we have endeavoured to explain, and particularly the following:—

"That freedom from restraint is calculated to give the utmost extension to foreign trade, and the best direction to the capital and industry of the country.

"That the maxim of buying in the cheapest market, and selling in the dearest, which regulates every merchant in his individual dealings, is strictly applicable as the best rule for the trade of the whole nation.

"That of the numerous protective and prohibitory duties of our commercial code, it may be proved, that, while all operate as a heavy tax on the community at large, very few are of any ultimate benefit to the classes in whose favour they were originally instituted, and none to the extent of the loss occasioned by them to the other classes.

"As long as the necessity for the present amount of revenue subsists, your petitioners cannot expect so important a branch of it as the customs to be given up, nor to be materially diminished, unless some substitute less objectionable be suggested. But it is against every restrictive regulation of trade, not essential to the revenue; against all duties merely protective from foreign competition; and against the excess of such duties as are partly for the purpose of revenue, and partly for that of protection,—that the prayer of the present petition is respectfully submitted to Parliament."

The attention which this petition was the means of drawing to the anti-commercial principles of our restrictive system, powerfully tended to bring about the successive relaxations which, since its presentation to Parliament, have been made in our commercial code. Within the last few years, several circumstances have combined to draw public attention still more strongly to this subject. At a meeting of the Chamber of Commerce of Manchester, to receive the report of Dr Bowring on the Prussian Commercial League, the following resolution was passed, disclaiming protecting duties of every kind:—"This meeting regards the present as the proper occasion for reiterating its adherence to the opinion so often declared by this chamber, that the prosperity, peace, and happiness of this and other nations can be alone promoted by the adoption of those just principles of trade which shall secure to all the right of a free interchange of their respective productions; and this meeting on behalf of the great community whose interests it represents, feels especially called upon to declare its disapprobation of all those restrictive laws which, whether intended for the protection of the manufacturing or agricultural classes, must, in so far as they are operative, be injurious to the rest of the nation, unjust to the world at large, and in direct hostility to the beneficent designs of Providence." And in January 1839, deputations of merchants and manufacturers assembled in London, from Manchester, Liverpool, Leeds, Birmingham, Sheffield, Derby, Nottingham, Wolverhampton, Glasgow, Paisley, and other great towns, passed a resolution to the same effect. To these testimonies in favour of the principle of free trade has now to be added that of the Select Committee of the House of Commons on Import Duties, already alluded to, who "report their strong conviction of the necessity of an immediate change in the import duties of the kingdom," and "recommend that, as speedily as possible, the whole system of differential duties and restrictions should be reconsidered, and a change effected in such a manner that existing interests may suffer as little as possible in the transition to a more equitable state of things." The deep and general sensation which has been produced by their report throughout the country affords just grounds to hope that many of the improvements which it suggests in our commercial code will erelong be carried into effect by the legislature.

COMMISSION, OR BROKERAGE, the allowance to a factor, agent, or broker, for transacting the business of others. It is generally charged at so much per cent., the amount being regulated either by stipulation or the usage of trade. A commission *del credere* is a higher rate charged in those cases where the factor, or other agent, guarantees his dealings, or in other words, engages to be answerable, as if he himself were the proper debtor. [DEL CREDERE.]

These allowances are calculated by the Rule of Three, or Simple Proportion; the first term being always 100, the second the rate of commission, and the third the sum upon which the commission is granted, while the fourth is the allowance to be made. The following table will facilitate such calculations for the common rates:—

COMMISSION OR BROKERAGE TABLE.

Prin.	¼ per cent.			½ per cent.			1 per cent.			2 per cent.			2½ per ct.			3 per cent.			4 per cent.			5 per cent.			Prin.
L.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	L.
100	0	5	0	0	10	0	1	0	0	2	0	0	2	10	0	3	0	0	4	0	0	5	0	0	100
90	0	4	6	0	9	0	0	18	0	1	16	0	2	5	0	2	14	0	3	12	0	4	10	0	90
80	0	4	0	0	8	0	0	16	0	1	12	0	2	0	0	2	8	0	3	4	0	4	0	0	80
70	0	3	6	0	7	0	0	14	0	1	8	0	1	15	0	2	2	0	2	16	0	3	10	0	70
60	0	3	0	0	6	0	0	12	0	1	4	0	1	10	0	1	16	0	2	8	0	3	0	0	60
50	0	2	6	0	5	0	0	10	0	1	0	0	1	5	0	1	10	0	2	0	0	2	10	0	50
40	0	2	0	0	4	0	0	8	0	0	16	0	1	0	0	1	4	0	1	12	0	2	0	0	40
30	0	1	6	0	3	0	0	6	0	0	12	0	0	15	0	0	18	0	1	4	0	1	10	0	30
20	0	1	0	0	2	0	0	4	0	0	8	0	0	10	0	0	12	0	0	16	0	1	0	0	20
10	0	0	6	0	1	0	0	2	0	0	4	0	0	5	0	0	6	0	0	8	0	0	10	0	10
9	0	0	5½	0	0	10¾	0	1	9½	0	3	7¼	0	4	6	0	5	4¾	0	7	2½	0	9	0	9
8	0	0	4¾	0	0	9½	0	1	7¼	0	3	2½	0	4	0	0	4	9½	0	6	4¾	0	8	0	8
7	0	0	4¼	0	0	8½	0	1	4¾	0	2	9½	0	3	6	0	4	2½	0	5	7¼	0	7	0	7
6	0	0	3½	0	0	7¼	0	1	2½	0	2	4¾	0	3	0	0	3	7¼	0	4	9½	0	6	0	6
5	0	0	3	0	0	6	0	1	0	0	2	0	0	2	6	0	3	0	0	4	0	0	5	0	5
4	0	0	2½	0	0	4¾	0	0	9½	0	1	7¼	0	2	0	0	2	4¾	0	3	2½	0	4	0	4
3	0	0	1¾	0	0	3½	0	0	7¼	0	1	2½	0	1	6	0	1	9½	0	2	4¾	0	3	0	3
2	0	0	1¼	0	0	2½	0	0	4¾	0	0	9½	0	1	0	0	1	2½	0	1	7¼	0	2	0	2
1	0	0	0½	0	0	1¼	0	0	2½	0	0	4¾	0	0	6	0	0	7¼	0	0	9½	0	1	0	1

COMMISSION OF BANKRUPTCY. Before the passing of the Bankruptcy Court Act, 1 & 2 Wm. IV. c. 56, bankruptcies were prosecuted under commission by the Lord Chancellor to certain commissioners. A different arrangement was adopted by that act, and the decree authorizing the prosecution of a bankruptcy is called a fiat. [COMMISSIONERS.] The expression "commission of bankruptcy" came into use for expressing the whole process of bankruptcy, and is still sometimes employed in that sense. [BANKRUPTCY.]

COMMISSIONERS *in the Law of Bankruptcy.*—IN ENGLAND the commissioners are officers who hold certain powers of administration and superintendence in matters of bankruptcy. Previous to the act 1 & 2 Wm. IV. c. 56, a special commission was issued under the great seal in every particular case; but the practice has been altered by that act. The commissioners in town bankruptcies are the six commissioners of the Court of Bankruptcy. [BANKRUPTCY, COURT OF.] Those in the country are permanent officers, chosen by the judges of the several circuits, from among the barristers, attorneys, and solicitors, in the respective counties of the circuits, subject to the approbation of the Chancellor. In town bankruptcies, a single commissioner acts. The commissioners of the Court of Bankruptcy take the oath of office on their appointment; the country commissioners take a new oath on the opening of each fiat. In a town bankruptcy, the fiat authorizes the petitioning creditor to prosecute in the Court of Bankruptcy; in country bankruptcies, before commissioners named. It has to be observed, that in bankruptcies prosecuted in the Court of Bankruptcy, one commissioner has the same authority which was formerly conferred by a commission, and is now conferred on country commissioners by a fiat. Wherever the word "commissioners" is used in the following statements, it must be understood to refer to one commissioner in town bankruptcies, unless otherwise specified.

The commissioners receive proof of the petitioning creditor's debt, who must attend before them in person, unless under very peculiar circumstances. They are empowered to summon before them "any person whom they shall believe capable of giving any information concerning the trading of, or any act or acts of bankruptcy" committed by, the person petitioned against, and they may command production of all documents tending to the same purpose. The remedies and means of enforcement are the same as those below stated, with regard to the other examinations (6 Geo. IV. c. 16, § 24). Being satisfied of the debt, trading, and act of bankruptcy, they adjudge the party bankrupt (§ 24), subject to review. After adjudication, the commissioners appoint the meetings for the bankrupt to surrender and conform (§ 25), and at these, and every dividend meeting, creditors may prove their debts before the commissioners. [PROOF.] The commissioners are empowered, after adjudication, to summon before them persons suspected of having any part of the bankrupt estate in their possession, or of being indebted to the bankrupt, or any individuals who can give information as to his person, trade, or dealings, and they may require such individuals to produce books, papers, and vouchers. They can enforce attendance by warrants (§ 33). The examination may be on oath, and either written or verbal, and parties may be required to sign written answers. On refusal to answer lawful questions, to produce vouchers, or to sign answers to questions, the commissioners may commit the party without bail, until satisfactory answers are given, and the other directions of the act are complied with (§ 34). The commissioners are empowered to allow charges to witnesses, who must, as in service of a subpœna, have their expenses tendered (§ 35). They have similar authority to examine the bankrupt, and the same means of enforcing attendance, and "it shall be lawful for them to examine such bankrupt upon oath, either by word of mouth, or on interrogatories in writing, touching all matters relating either to his trade, dealings, or estate, or which may tend to disclose any secret grant, conveyance, or concealment of his lands, tenements, goods, money, or debts, and to reduce his answers into writing, which examination, so reduced into writing, the said bankrupt shall sign and subscribe." And the commissioners are empowered to imprison him to remain without bail "until he shall submit himself to the said commissioners to be sworn, and full answers make to their satisfaction to such questions as shall be put to him, and sign and subscribe such examination" (§ 36). The commissioners may examine the bankrupt's wife, with like means of enforcement, "for the finding out and discovery of the estate, goods, and chattels of such bankrupt, concealed, kept, or disposed of by such wife, in her own person, or by her own act, or by any other person" (§ 37). Quakers may make solemn affirmation on such examinations, and falsehood, either under oath or solemn affirmation, infers the punishment of perjury (§ 99). § 39 of the act regulates the course to be adopted by the courts of law when applied to by habeas corpus or otherwise to interfere with commitments under the act. § 40 provides for the protection of the commissioners in cases of actions of damages. No single commissioner of the Court of Bankruptcy can commit an individual, except to a messenger of the court, to be brought before a subdivision court, or court of review, within three days (1 & 2 Wm. IV. c. 56, § 7). In the examinations a witness is not bound to answer a question which may criminate him, or expose him to penalties, but it will not serve as a ground of protection that the answer may expose him to a civil claim. "And a bankrupt may not only be compelled to disclose the disposition of his property, and the mode of it, although such instances may tend to prove an act of bankruptcy, but he may be examined as to whether a deed was voluntary; and he cannot refuse to discover the particulars relating to his estate, although such information may tend to show that he has committed a criminal act; but if the question put to him be, whether or not he has done an act clearly criminal, he may refuse to answer it" (*Henley's B. L.* 91). Any commissioner of the Court of Bankruptcy may adjourn an examination, or a proof of debt, to a subdivision court, or a court of review; and if a commissioner decide any point of law or equity, or as to the refusal or admission of evidence in the case of a disputed debt, the decision is subject to review (1 & 2 Wm. IV. c. 56, §§ 30, 31). Commissioners of the Court of Bankruptcy are judges of record, and have the corresponding privileges and protections (Ib. § 1). The country commissioners are protected in the execution of their duty by 6 Geo. IV. c. 16, § 41-44. (*Statutes*, as quoted. *Henley's B. L.* 79-97.)

In Ireland there was, by the original bankruptcy act, 6 Wm. IV. c. 14, one commissioner, but a second was added by 7 Wm. IV. and 1 Vict. c. 48. In each bankruptcy, a separate commission is issued under the great seal to one of the commissioners, but they only require each to take one oath of office (§ 4). The commissioner summons the bankrupt, subjects him to examination, inquires into the trading and bankruptcy by witnesses and documents, in the same manner as the commissioners in England, and he has similar remedies for enforcing attendance. The Lord Chancellor may, on affidavit or otherwise, issue an extraordinary commission, for proof of debts, examination of witnesses, and other matters, while the person so appointed possesses the same powers to compel attendance of witnesses, and examine them, and to enforce production of documents, as the official commissioner (§ 57). [Bankruptcy.]

In Scotland there are commissioners appointed in each sequestration or bankruptcy, whose situation and duties, however, are very different from those above described. They form a committee of three creditors, who are the assessors or council of the trustee, and whose consent is necessary to certain transactions connected with sequestrations. They are chosen at the meeting for electing the trustee, and in the same manner, by creditors duly qualified. [Trustee.] They must be chosen from among the creditors or mandatories, and their election is declared by the Sheriff. Where a commissioner has become disqualified, or has otherwise ceased to act, the trustee must call a meeting to elect a new one. The commissioners must concur with the trustee in submissions and other transactions. They meet at stated intervals to examine into the proceedings of the trustee, audit his books, and declare dividends. They fix the trustee's remuneration, and have the privilege of assembling when they think fit, to ascertain the situation of the estate. Two are a quorum. They are not entitled to purchase property sold under the bankruptcy. [Sequestration. Trustee.] (2 & 3 Vict. c. 41. *Burton's Manual of the Law of Scotland.*)

COMPANY, an association of persons for the prosecution of a common undertaking. In carrying on those costly enterprises in which the capital of a commercial country is employed, the resources and the mind of one person are often inadequate. They require the combined capital and industry of many, with the unity of purpose and of person which belongs to an individual. Hence the origin of companies, of which the following kinds may be distinguished:—

Private Companies, or voluntary associations of two or more persons for the acquisition of profit, with a contribution for that end, of stipulated shares of property and industry; accompanied by an unlimited mandate to each partner to bind the company in the line of its employment, and a guarantee to third parties of all the engagements undertaken in the social name. Companies of this kind may be subdivided into Partnerships and Joint-Adventures, under which heads, respectively, these contracts are fully described.

Joint-Stock Companies differ from the preceding in respect,—1*st*, That the credit is placed on the joint-stock of the company, as indicated by a descriptive name, instead of being personal, as indicated by a firm; 2*d*, That the management is delegated by the partners to a body of directors; and, 3*d*, That the shares are transferable.

Public or *Chartered Companies* are of different kinds. A royal charter enables a joint-stock company to enjoy the privileges of a corporation, and trade under a limited responsibility; the shares of such a company are transferable; the company itself undissolved by the death or bankruptcy of partners; and the management and title to pursue are vested in the officers appointed according to the charter. But to give the privilege of monopoly to a company, there must be an Act of Parliament, as in the cases of the East India Company and Bank of England.

Regulated Companies are chartered commercial associations which do not trade upon a joint-stock, but are obliged to admit any person properly qualified, upon paying a certain fine, and agreeing to submit to the regulations of the company, each member trading upon his own stock, and at his own risk. After the revival of commerce in the 15th, 16th, and 17th centuries, it was the practice in most modern states to assign such branches of trade as were reckoned peculiarly hazardous to the exclusive management of such companies, who were authorized to levy duties, and to provide for their common defence and security, as few governments had then ships and troops to spare for the defence of their subjects in remote regions. But the necessity for these associations, if it ever existed, ceased long ago; and of the regulated companies which were formerly established in Britain, as the Hamburg Company, the Russia Company, the Turkey Company, the African Company, and others (*Wealth of Nations*, b. 5, c. 1), a few only exist in name; all British subjects being now at liberty to trade with friendly countries, on their conforming to the regulations laid down by such countries, and to our customs laws.

Patent Companies are associations instituted under the act 7 Wm. IV. & 1 Vict. c. 73, which provides for the limitation and regulation of the partners by letters patent; in this way avoiding those cumbrous peculiarities of a corporation which are inconvenient to a mere trading company, and rendering the expense of an Act of Parliament unnecessary.

Sociétés en Commandite, though not sanctioned by the British laws, are common in France and elsewhere. They consist of a number of individuals, of whom one or more undertake the management, and are held indefinitely responsible for all engagements, as in the case of ordinary partnerships; and the others are mere shareholders, responsible only to the amount of their contributions, either paid up or contracted to be paid into the joint-stock of the association. The first, called in France *commandités*, may be designated managing partners; and the second, called *commanditaires*, non-responsible partners, or simply shareholders. Thus the commandite association is intermediate in its character between an ordinary partnership and a privileged trading company. The managing partners are liable in their whole fortunes; the others only in a limited sum.

The Constitution of Companies, in regard to the mutual rights of the partners, and their liabilities to the public, will be treated in detail under the heads PARTNERSHIP and JOINT-STOCK COMPANY. But an opportunity will be here taken to describe those proceedings which are usual or necessary in the institution of a company to undertake the formation of a railway, canal, or other work requiring a private Act of Parliament. In the prosecution of such undertakings, the first step usually taken is for the projectors to draw up the plan of the association, with a statement of the advantages to be derived from it, and the proposed method of carrying it into effect. This is submitted to a meeting of those interested. If the plan be approved, a subscription is opened to defray immediate expenses, and means are taken to give publicity to the plan so adopted, in order to procure shareholders. An estimate has generally been formed of the amount which is considered sufficient for the completion of the object; and the shares are agreed to be paid in such proportions and at such times as shall be afterwards fixed by the bill. In the view of introducing a private bill into Parliament, surveys are then made, and plans prepared, together with a list containing the names of every person whose interests are immediately affected, or whose estate, or any part thereof, is required for the purposes of the undertaking. Duplicates of this list, having three blank columns, headed *assenting*, *dissenting*, and *neutral*, are forwarded to every such person, to be signed by him in whichever column he pleases, and numerous other regulations are established by the "Standing Orders" of the two Houses of Parliament, for the purpose of securing to private bills, in their progress, the observation of all whose interests they may affect; for an account of which we must refer to these orders themselves.

The preliminaries prescribed by the standing orders of the House of Commons having been fulfilled within a certain defined time before the assembling of Parliament, and subscribers obtained to the amount of at least three-fourths of the estimated expense, one-tenth of which subscribed amount is also required by the same orders to be paid up and deposited in the Bank of England, in a chartered bank in Scotland, or invested in government securities,—the draft of the bill is prepared, and a petition is addressed to the House, praying that it may be received. This petition must be presented on or before a certain day in each session, which is always fixed at the commencement of the session, and is usually within a fortnight or three weeks thereafter. If presented in time, with the necessary documents and plans, it is referred to a select committee, taken by ballot from certain lists into which the whole House is divided, for particular divisions of the country. This committee having ascertained that the standing orders have all been complied with, report the same to the House, and the bill, having been printed, and copies distributed among the members, is received and read a first time. After the lapse of a certain number of days, it is moved that the bill be read a second time, when, if any objection is made, it is then stated, and the bill is either rejected or referred to a select committee, who consider it clause by clause, and are empowered to examine witnesses, and to hear counsel both in support and opposition. The committee, in almost every case, introduce a maximum of the toll, or duty, or rent (according to the nature of the measure), to be levied, and in many cases declare a maximum of interest to be divided on the capital, and order the surplus to be invested in the public funds till the amount is sufficient to repay the advances by the shareholders,—the improvement to be then thrown open for the free enjoyment of the public. In many cases also provision is made to secure the completion of the work when once begun. The committee having completed their labours, announce their decision in a report; after which the House proceeds to the third reading of the bill, when it may be again discussed, though the report of the committee is in most cases agreed to without any farther opposition. If the bill is passed, it is carried to the House of Lords, where it goes through nearly the same forms; and if it be finally approved of by the Upper House, and receive the royal sanction, it becomes an Act of Parliament. It should also be stated, that early in the session the House fixes periods within which the different stages of private bills are required to be forwarded.

The expenses of carrying the generality of such bills through Parliament are very considerable. A much higher amount of fees is paid in the case of a private bill than in that of a public bill, to the clerks and other officers of the two Houses; besides which, the expenses of agency, of bringing up witnesses, and the other charges attending the making application to Parliament for a private bill, at present often amount to many times as much as the fees. The following shows the expenses of constituting several of the English railway companies:—

London and Birmingham railway (112½ miles); payments for act of incorporation, £72,868.
North Midland railway (72 miles), £40,588.
Great Western railway (114 miles), £38,710.
Southampton railway (75 miles), expended in raising capital, procuring act, &c., £39,040.
Liverpool and Manchester railway; parliamentary and law expenditure, £28,466.

COMPASS (the Mariner's), an instrument employed in directing the course of vessels at sea. It consists of a circular card, having a magnetized needle attached to the back of it, so as to form one of its diameters; this diameter being supported on a point, and exactly balanced on its centre, turns freely round with the card, which by a particular contrivance is so suspended within a cylindrical box that it remains perfectly horizontal, notwithstanding the irregular motions to which a ship is liable at sea: it is the property of the needle, when thus balanced, to point *nearly* to the North Pole; whence, by simply looking at the position of the needle, the mariner can see the direction in which the vessel is sailing, and regulate his steering accordingly.

The course indicated by the needle, however, is only the *magnetic* bearing, which is seldom the true direction; for the magnet rarely points exactly north, being subject to two errors from different causes, called the *variation* and the *deviation*. The former is the result of a slow progressive alteration in the position of the magnetic pole, which, within certain limits, moves from east to west, and back again from west to east. When it was first noticed, about the middle of the 16th century, the needle in London pointed some degrees to the east of the true north; this variation gradually became less, till in 1660 it coincided with the North Pole of the earth; it then gradually varied to the west, till in 1828 the variation amounted to about 25°; since which it has decreased, being at present about 24°. It also changes 10 or 15 minutes at different times of the day. The variation of the compass, however, is very different in different parts of the globe, and must therefore be determined at sea by comparing the true bearing of a celestial object with its bearing by compass, which is done by a finer instrument called an *azimuth compass*. The cause of the variation of the compass has hitherto eluded the researches of philosophers. Captain Parry discovered that when he had passed to the north of a certain spot westward of Hudson's Strait, the needle, which had been previously varying to an extreme degree, absolutely went half round the compass, and this continued to be the case until he had sailed considerably farther north. Whether this peculiar attraction had any reference to the real magnetic pole, further observations will perhaps determine.—The *deviation* of the compass is a local error, occasioned by the attraction of iron on board ship: it was first observed by Mr Wales, the astronomer of Captain Cook, and has been the cause of numerous shipwrecks: an ingenious method of discovering its amount, however, has been lately invented by Professor Barlow. The *dip* of the needle is a deviation from its horizontal line; it is different in different places, and, like the variation, undergoes slow changes: its diurnal change is not perceptible.

The inventor of the mariner's compass is not known. It was employed in Europe in navigation, about the middle of the 13th century, but the exact date of its introduction is matter of doubt. The Chinese, however, are said to have been acquainted with it much earlier. The attractive power of the loadstone was known to the ancient Egyptians, but was not by them applied to any practical purpose. [COMMERCE.]

COMPOSITION-CONTRACT, an agreement between a bankrupt trader and his creditors, by which, on its being ratified according to the terms of the statutes, the debtor is relieved from the farther operation of the bankrupt laws.

IN ENGLAND, by the bankrupt statute 6 Geo. IV. c. 16, this practice was introduced from the sequestration law of Scotland. By § 133, any meeting after the bankrupt has passed his last examination (of which and its purport 21 days' notice shall have been given in the Gazette), if he or his friends make an offer of composition, or security for composition, agreed to by nine-tenths in number and value of the creditors present, another meeting is to be appointed, and if at that meeting nine-tenths in number and value agree, the bankruptcy is to be superseded. By § 134, a creditor whose debt is less than £20, is not reckoned in number, but his debt must be computed in value. Any creditor to the amount of £50 residing out of England, must have notice of the meeting so long before as to have time to vote, and such creditor may vote by letter of attorney, as in the case of assignees. A creditor agreeing to accept any gratuity or higher composition for assenting, forfeits the debt and the gratuity; and the bankrupt may be compelled to make oath that no such transaction has taken place, and that he has used no undue means to obtain the assent of his creditors. The composition-contract having been in use in Scotland since 1793, the practice in that part of the island will in a great measure regulate that of England, except where a distinction is created by statute.

IN SCOTLAND, by the late sequestration act, 2 & 3 Vict. c. 41, an offer of composition may be made at the meeting appointed for electing a trustee. [TRUSTEE.] If a majority in number and nine-tenths in value, at the meeting, agree to entertain the offer, the trustee must advertise in the Edinburgh Gazette that an offer has been made and entertained, and that it will be decided upon at a meeting to be held after the bankrupt's examination, stating the day, hour, and place of the meeting. He must also send a circular by post to each creditor claiming, or mentioned in the bankrupt's state, containing a notice of the resolution and meeting, with a specification of the offer and security, and an abstract of the state of the affairs and valuation of the estate, "so far as the same can be done, to enable the creditors to judge of the said offer and security" (§ 113). If at the meeting, a majority in number and nine-tenths in value accept, a bond of caution [CAUTIONARY OBLIGATION] by the bankrupt and his cautioner may be lodged with the trustee. The trustee has then to send a report of the resolution of the meeting and the bond of cautionary to the Bill-Chamber Clerk of the Court of Session, or the Sheriff-Clerk of the district. The latter alternative is made, that the trustee may have the decision of the Lord Ordinary, or of the Sheriff, according to his choice. If the judge find that the requisites are complied with, he must judicially approve of the composition, after hearing all objections by opposing creditors, "and if he shall refuse to sustain the offer, or reject the vote of any creditor, he shall specify the grounds of refusal or rejection" (§ 114). The second occasion for an offer is at the meeting after the examination, or at any subsequent meeting called for the purpose by the trustee, with consent of the commissioners [COMMISSIONERS], when if a majority in number and four-fifths in value resolve to entertain the offer, the trustee must send notice to the creditors, as above, for a meeting within 21 days. At the meeting, a majority in number and four-fifths in value may accept the offer. The proceedings must be judicially certified as above (§ 115). If an offer having been made has been rejected, or has otherwise become ineffectual, no second offer can be entertained, unless nine-tenths in number and value assent in writing, and the offer, stating the amount of composition and the terms of payment, be subscribed by the cautioner. Such an offer not only requires to be accepted by a majority in number and nine-tenths in value of the creditors called to a meeting by the trustee, but to be assented to by nine-tenths in value of all the creditors who have produced affidavits (§ 121). Before a composition is approved of, the commissioners have to audit the trustee's accounts, and ascertain the balance, subject to review by the Lord Ordinary or Sheriff (§ 117). The bankrupt and his cautioner in the composition are precluded from objecting to any debt given up by the bankrupt in his "state," or admitted in his offer of composition, and likewise to any security held by a creditor, unless an objection have been made in the offer of composition, written notice having been given to the creditor (§ 119). A creditor who has not produced his claim before the date of the judicial approval of the composition, has no claim against the cautioner after two years from its date (§ 120). On a composition being approved of, and the bankrupt taking the declaration or oath prescribed by the statute, he is discharged. (§ 116.)

In Ireland, by 6 & 7 Wm. IV. c. 14, §§ 151 & 152, the composition-contract was established in the same terms as by §§ 133 & 134 of 6 Geo. IV. c. 16 in England, the notice of meeting being given in the Dublin Gazette.

CONESSI, the bark of the oval-leaved rosebay (*Verum antidysentericum*). It is obtained chiefly at Tellicherry, on the Malabar coast, whence it is sometimes called Tellicherry bark. It has lately been introduced into the British materia medica. (*Ainslie's Mat. Indica.*)

CONEY, or RABBIT (Fr. *Lapin.* Ger. *Koniglein.* It. *Coniglio.* Sp. *Conejo*), a well-known rodential little animal (*Lepus Cuniculus*, Linn.) remarkable for its fecundity,—beginning to breed at the age of six months, and producing several litters in a year, generally from five to seven or eight at a time. Its fur is in considerable demand, particularly for the hat trade; at one time the silver-haired varieties, or silver sprigs, were much valued for ornamental linings to cloaks, and other pieces of dress. Coney furs are a common article of import.

CONSIGNMENT is an expression employed to designate any transaction by which an individual in one place transmits or consigns goods to an individual in another place, to be at his disposal under conditions expressed or implied. The person who transmits the goods is called the consigner,—he who receives them the consignee. Consigner and consignee are used by merchants to express generally the shipper of merchandise, and the person to whom they are addressed, by bill of lading or otherwise. The most ordinary description of consignment is that to a factor, who has to traffic with the goods for the use of his principal, and who may deal with third parties not warned of limitations to his power, as if he were the principal. [Factor, *and substance of the Factor's Act under that head.*] Cargoes are sometimes consigned from debtors to creditors in satisfaction of debt, and sometimes as a fund of credit for advances, the consigner being entitled to draw on the consignee to a certain amount, or the latter advancing cash to the former. On failure of the consigner, the consignee has a lien on the goods in his hand for his advances. (*Paley on Principal and Agent.*) [Factor. Lien.]

CONSOLIDATED FUND. [Budget. Revenue and Expenditure.]

CONSOLS, a familiar term used to denote the portion of the national debt of the United Kingdom forming the 3 per cent. consolidated annuities.

CONSUL, an officer appointed by a government to reside in some foreign country for the purpose of facilitating and protecting the commerce of the subjects of such government. Consuls are not in general reckoned among diplomatic ministers; but in some particular cases (such as that of the consuls-general sent to some of the semi-barbarous states of Africa), having diplomatic duties to perform, they are accredited and treated as ministers. According to the general instructions of the British government, a consul must study "to become conversant with the laws and general principles which relate to the trade of Great Britain with foreign parts; to make himself acquainted with the language, and with the municipal laws of the country wherein he resides, and especially with such laws as have any connexion with the trade between the two countries." His principal duties are "to protect and promote the lawful trade and trading interests of Great Britain by every fair and proper means;" "to caution all British subjects against carrying on an illicit commerce to the detriment of the revenue, and in violation of the laws and regulations of England, or of the country in which he resides;" "to give his best advice and assistance, whenever called upon, to his Majesty's trading subjects, quieting their differences, promoting peace, harmony, and good-will amongst them, and conciliating as much as possible the subjects of the two countries upon all points of difference which may fall under his cognizance;" and to uphold the rightful interests and privileges of British subjects both in person and property, placing, however, cases where redress cannot be obtained from the local authorities in the hands of the British minister. The consul is also required to send annually to the Secretary of State for Foreign Affairs a return of the trade at the ports within his consulate; and to transmit quarterly a weekly account of the prices of agricultural produce, with the course of exchange, and any remarks connected with these subjects which he may consider necessary. He is further required to acquaint his own government with the appearance of any contagious disease at the place of his residence; to afford relief to any distressed British subjects thrown upon the coast, or reaching by chance any place within his district; and to furnish intelligence, obtain supplies, and generally assist any king's ships coming within his consulate.

The consuls appointed by our government are generally British subjects; but this is not an invariable rule. Previous to the year 1814, the greater part of the English consuls abroad, who held commissions under the crown, were merchants at the respective places of their consular residence. Many of those consuls had no salary from government; their emoluments consisted of fees, which they levied upon the tonnage of British ships, and upon the value of their cargoes. This mode of remunerating these officers having created dissatisfaction among the commercial classes, a new system was introduced in the year 1826, and an act of Parliament was passed to abolish all consular fees on tonnage and cargoes, and to enable the crown to give remunerating salaries to consuls. According to the system founded upon the act of 1826, it was determined "that British consuls should not be in any way concerned, directly or indirectly, in commercial pursuits." This system was acted upon with some few exceptions until the year 1832, when a very considerable reduction was made in the salaries assigned to them, and "permission was given to engage in commercial pursuits," as a set-off against the reduction of salary. Thus, the principle established in 1826 was reversed, and restriction "to engage in mercantile pursuits" made the exception instead of the rule.

TABLE of Fees payable to Consuls-general and Consuls by the act 6 Geo. IV. c. 87.

TABLE (A.)

Certificate of due landing of goods exported from the United Kingdom	2	dollars
Signature of ship's manifest	2	..
Certificate of origin, when required	2	..
Bill of health, when required	2	..
Signature of muster-roll, when required	2	..
Attestation of a signature, when required	1	..
Administering an oath, when required	½	..
Seal of office, and signature of any other document not specified herein, when required	1	..

TABLE (B.)

Bottomry or arbitration bond	2	..
Noting a protest	1	..
Order of survey	2	..
Extending a protest or survey	1	..
Registrations	1	dollar
Visa of passport	½	..
Valuation of goods	1	per ct.
Attending sales ½ per cent. where there has been a charge for valuing, otherwise 1 per cent.		
Attendance, out of consular office, at a shipwreck, five dollars per diem for his personal expenses, over and above his travelling expenses.		
Do. on opening a will	5	dollars
Management of property of British subjects dying intestate	2½	per ct.

The dollars mentioned in the preceding tables are in all cases to be paid by the delivery of dollars, each of which is to be of the value of 4s. 6d. sterling, and no more, according to the rate of exchange prevailing at the place where such payment is made.

CONTINENTAL SYSTEM. [COMMERCE.]

CONTO, a Portuguese word, denoting a million. A conto of reis is 1000 milreis; commonly expressed 1000 $000.

CONTRABAND, from the Italian *Contrabando*, contrary to proclamation, is applied in one sense to the goods which are prohibited to be exported or imported, on the ground of theories regarding national policy, or protection to home produce. These are embodied in the customs duties act, 3 & 4 Wm. IV. c. 52, an abridgment of which will be found under the title CUSTOMS. Contraband of war is applied by belligerent powers to the furnishing of arms, provisions, or other assistance to powers with which they are at war, by neutral states, or their own subjects. Like most other questions in the law of nations, it is exceedingly difficult to decide what goods may or may not give assistance in the furtherance of hostilities, and consequently what are or are not contraband. "Not only arms, powder, ball, and other ammunition, but also horses and furniture, pitch, tar, sails, hemp, and cordage, masts, yards, and all other necessaries for the building or equipment of ships, are generally considered as contraband" (*Marshall on Insurance*, 73). The penalties where neutrals convey contraband, are somewhat arbitrary, depending often on the power of the nation that enforces them. Formerly the vessel and cargo were forfeited, but in later times the penalty has generally been mitigated. It is treasonable in a subject of Britain to supply contraband to a nation with which this country is at war, and all contracts, including insurances, made here, in relation to the conveyance of contraband, whether by British subjects or neutrals, are void. (*Ib.* 72-79.)

CONTRACT, OR AGREEMENT, may be defined the legally expressed consent of two or more persons to give and receive some specified benefit.

IN ENGLAND, a person *non compos* cannot enter into an agreement. By the original principles of the law, infants, or minors, that is, persons under twenty-one years of age, cannot contract. In practice, however, in general, their contracts for their benefit are supported, while they are entitled to recede from those to their prejudice. A minor may bind himself for necessaries, such as food, clothing, medicine, and education; and in judging of what are necessaries, the comparative age and position of the party will be considered. Thus, where a minor was a captain in the army, he was held liable to pay for his servant's livery,—his situation being held as requiring such an attendant (Hands *v.* Slaney, 8 *T. R.* 578). If one lends money to a minor, it would seem that the borrower will not be bound though he lay it out on necessaries, as the necessity is judged of from the nature of the contract, not from what the minor may do in consequence of it. By 9 Geo. IV. c. 14, § 5, a confirmation by one of full age, of a contract incurred in minority, cannot be validly made except in writing. A wife during intermarriage is incapable, without her husband's consent, of entering on an agreement, in the general case; but with respect to her separate property, she is entitled to act as if she were a single woman. (2 *Vesey, senior*, 190.)

All agreements to do an act on one side, should have a consideration on the other; but a deed duly executed, in the most solemn manner, under seal, is binding without a consideration; and negotiable instruments, such as bills and notes, bind without consideration, where the interest of third parties is involved. [Bill.] In the general case courts of law will not interfere either to enforce voluntary agreements, not having any of these qualifications, unless creditors or other third parties have an interest, or to annul them, unless in cases of fraud. The party injured by breach of agreement, may have recourse at common law, or in equity, according to the circumstances. Where specific performance is demanded, the latter is the proper tribunal: Where damages for non-performance will compensate the claimant, a court of law and a jury should be resorted to. "Therefore, in general, they (Courts of Equity) will not allow a bill for a specific performance of contracts of stock, corn, hops, or other articles of merchandise, but will leave the plaintiff to his remedy at law." (*Bacon's Ab.; Agreements, B.* 1, *note.*)

By the statute of Frauds, 29 Ch. II. c. 3, among many provisions which refer chiefly to agreements as to real property, it is by § 4 enacted, "That no action shall be brought whereby to charge any executor or administrator, upon any special promise, to answer damages out of his own estate, or whereby to charge the defendant, upon any special promise, to answer for the debt, default, or miscarriages of another person; or to charge any person upon any agreement made upon consideration of marriage, or upon any contract or sale of lands, tenements, or hereditaments, or any interest in or concerning them; or upon any agreement that is not to be performed within the space of one year from the making thereof; unless the agreement upon which such action shall be brought, or some memorandum or note thereof, shall be in writing, signed by the party to be charged therewith, or some other person thereunto by him lawfully authorised." By a still more important enactment (§ 17), "no contract for the sale of any goods, wares, and merchandise for the price of ten pounds sterling or upwards, shall be allowed to be good, except the buyer shall accept of part of the goods so sold, and actually receive the same, or give something in earnest to bind the bargain, or in part of payment; or that some note or memorandum in writing of the said bargain be made and signed by the parties to be charged, or their agents thereunto lawfully authorized." By 9 Geo. IV. c. 14, § 7, this provision is declared to apply, though the goods may not be made, or fit for delivery at the time of the agreement. With regard to the delivery, where goods are ponderous, it may be symbolical, as by delivery of the key of the warehouse. Acceptance of samples is only held acceptance of a part, when it really is part of the bulk. The consideration need not be expressed in the memorandum. This document may consist of two separate writings. Where the seller only signed, and the name of the buyer did not appear, it was held insufficient (Champion *v.* Plummer, I. *Bos. & Pul.* 252). Where one expresses his consent by writing his name, it is of no consequence whether it be by subscription, or in the body of the memorandum. An agreement in part performed, is not affected by the statute. Such acts must be done distinctly with the view of fulfilling the agreement. (*Bacon's Ab.; voce Agreements.*)

In Ireland, the equivalent to the English statute of frauds is 7 Wm. III. c. 12, which is amended as above by 9 Geo. IV. c. 14.

CONVOY, in the law of shipping, is applied to a naval force appointed by the government, for the protection of vessels plying between certain ports in time of war. An obligation to sail with convoy has occasionally been created and enforced by act of Parliament (see 38 Geo. III. c. 76, & 43 Geo. III. c. 57), while at other times it has been left to the private arrangement of the parties interested, in their capacity of underwriters, &c. It was decided in 1783, that an obligation to sail with convoy is not fulfilled by incidentally accompanying and being under the protection of a ship of war, and that only vessels commissioned for that express purpose by the government constitute convoy (*Park on Insurance*, 449). The admiral commanding-in-chief on a foreign station, is, however, the representative of the government to the effect of appointing such protection. It frequently happens that the convoy does not sail from the same port as the vessel; when this is the case, the obligation on the master is to proceed, in the usual manner, to the place of rendezvous. Convoys cannot generally be appointed for every individual voyage during its whole continuance, and in such cases vessels may have to conclude their voyages unprotected. Each voyage is, however, attached to some particular convoy, which must be kept company with so far as it goes. The master of a vessel bound to join convoy must immediately apply for sailing instructions, that he may be able to obey the signals, and may know the place of rendezvous in case of separation. Unless it be owing to impediments over which the master has no control, he is not considered as having put himself under the protection of convoy, until he has obtained sailing instructions. The principal questions as to sailing with convoy arise out of cases where it is a warranty specified or implied in insurances, and in this view it will be discussed under the head WARRANTY.

COPAIBA, or **COPAIVA**, commonly called a balsam, but properly an oleo-resin or turpentine, is a drug obtained from the *Copaifera officinalis*, a native of South America, and from other species of the same tree. Two kinds are sometimes distinguished, and named from the countries in which they are produced, the Brazilian (chiefly from the province of Para), and the West Indian. The former is thin, clear, of a pale colour, pleasant aromatic smell, and of an acrid bitter taste; while the latter is thick, golden yellow, not transparent, and of less agreeable smell, even resembling turpentine. Sp. gr. ·980. It is often adulterated with castor-oil and the finer sorts of turpentines. When good, it should be completely soluble in alcohol of the strength of 90 per cent.; but the simplest test of its purity is to heat a small quantity in a watch-glass, when, if good, a hard brittle resin remains. This drug is celebrated for its action as a stimulant to the mucous surfaces. About 320 cwts. are annually entered for home consumption.

COPAL, a peculiar kind of resin obtained from a large tree (*Rhus copallinum*), found in various tropical countries. It usually appears in the form of round, hard, shining, transparent masses, brittle, tasteless, and nearly inodorous; and is generally of a lemon hue, though the best is nearly colourless. It is fusible and inflammable, insoluble in water, and differs from most other resins in being very sparingly soluble in alcohol. It is, however, dissolved by ether and some essential oils, though with difficulty. The resin is chiefly employed with oil of turpentine in making *copal varnish*, a substance which, when carefully prepared, is durable, susceptible of a brilliant polish, and so hard as to resist scratches. It is applied to tea-boards, snuff-boxes and other utensils, and also to the preservation and restoration of paintings. Copal is principally imported from Africa, though small quantities are occasionally brought from Mexico and the East Indies.

COPPER (Fr. *Cuivre*. Ger. *Kupfer*. It. *Rame*. Por. *Cobre*. Rus. *Mjed*. Sp. *Cobre*. Sw. *Koppar*), a metal of a beautiful red colour, and considerable lustre. It is very malleable and ductile, and has a peculiar smell when warmed or rubbed. It is so tenacious that a wire 1-10th of an inch in diameter will support nearly 300 lbs. Sp. gr. 8·8. Fusing point 1996° Fahr. The uses of this metal are inferior only to those of iron. It is used for coin, for covering the bottoms of ships, for boilers, and a great variety of utensils; also in the manufacture of colours, and in medicine. Its alloys are noticed under the heads of BELL-METAL, BRASS, BRONZE, GERMAN SILVER, SPECULUM METAL, and PINCHBECK.

Copper is found in the metallic state in nature, but not in great quantities. An amorphous mass is said to have been discovered in Brazil, weighing 2666 Portuguese pounds. The great source of its supply is an ore in which the metal is found combined with sulphur. In both states it is obtained in almost every mineral district in the world, in beds, or more commonly in veins in primitive and secondary mountains, accompanied by several other mineral substances. Mines of copper are largely worked in England, Chili, Cuba, Germany, Sweden, and Siberia; those of France, Spain, Hungary, Norway, and Ireland, are of much less consequence.

The English mines were scarcely worked prior to last century; they are chiefly situated in Cornwall, where the most common ore consists of copper, iron, and sulphur, in nearly equal proportions, and is called yellow copper ore, or copper pyrites; veins are also worked in the counties of Devon, Anglesey (particularly in Pary's mountain near Amlwch), and Stafford. Owing to the want of fuel in Cornwall and Devon, the ores are shipped from these countries to South Wales to be smelted, principally to works situated on the navigable rivers of Swansea and Neath; the smaller quantity of material being thus carried to the greater, while the vessels load back with coal for the use of the various steam-engines. The quantity of metallic copper yielded by the ore is commonly about 8 or 9 per cent. The produce of metal from the workings in Cornwall in 1775 was 3596 tons; in 1800, 5187 tons; in 1820, 7364 tons; and in 1838, 11,527 tons. The productive power of the mines has thus been increased more than threefold in the last 60 years. No statement can be given of the total quantity of copper raised in the United Kingdom before 1820; in that year it was 8127 tons; in 1830, 13,232 tons; and in 1840, about 16,500 tons. The annual value of this metal raised in the kingdom, estimated at from £90 to £100 per ton, may be taken at present at about £1,500,000.

The copper yielded by the British mines is more than sufficient for the consumption of the kingdom, and a considerable (but decreasing) quantity is exported; in 1820, it amounted to 121,958 cwts.; in 1830, to 183,154 cwts.; and in 1839, to 153,743 cwts. This last consisted of 16,555 cwts. unwrought in bricks and pigs; 128,977 cwts. sheets, nails, &c.; 762 cwts. coin; 39 cwts. wire; and 7410 cwts. wrought copper of other sorts. These are chiefly shipped at Liverpool and London for the East Indies, China, and the United States; considerable quantities are likewise sent to Germany, Holland, Canada, West Indies, and Brazil.

Of late years great quantities of copper ore have been brought to England, chiefly to Swansea, for the purpose of being smelted, and re-exported in the metallic state. In 1839, the amount of ore thus imported was 603,902 cwts., of which 346,048 cwts. were brought from Cuba, and 182,664 cwts. from Chili. Of the copper smelted from foreign ore, there were exported in the same year 112,830 cwts.; of which there were taken by France 84,567 cwts.; and the rest was sent in smaller quantities to the Netherlands and the United States.

British copper is exempted from the tax laid on Tin, and the oppressive regulations growing out of it. Copper sheathing and utensils, and old copper and pewter apparatus of British manufacture, returned from the British plantations; also copper stripped from vessels in ports in the United Kingdom may be admitted to entry duty free under the following regulations:—1. Old copper-sheathing off British vessels in ports in British possessions, upon proof that it was taken off in such ports, and also that it is the property of the owner of the ship from which it was so stripped, to be delivered to such owner.—2. Old copper-sheathing off any ship in any port of the United Kingdom, upon the fact being certified by the landing-waiter superintending the process; the old copper to be delivered only to the coppersmith, who may re-copper the vessel from which it was stripped, he making proof to that fact.—3. Old worn-out British copper and pewter utensils to be in all cases delivered when brought from B. P. in British ships, upon the consignee submitting proof that they had been used on a particular estate, and are consigned to him on account of the owner of that estate, and that he (the consignee) believes them to be of British manufacture. (*Min. Com. Customs, Feb.* 15, 1833.)

For regulations as to taking copper ore out of bond to be smelted, see Warehouses, Public Bonded.

Copper Manufactures. The custom-house accounts of exports include copper and brass manufactures together; the total quantity and declared value of these shipped in each of the years from 1828 to 1838 were as follows:—

	Cwts.	Declared Value.		Cwts.	Declared Value.
1829	161,241	£812,366	1834	205,960	£961,823
1830	189,592	867,344	1835	242,095	1,094,749
1831	181,951	803,124	1836	204,835	1,072,344
1832	213,482	916,563	1837	250,105	1,166,277
1833	192,974	884,149	1838	265,204	1,221,739

The chief shipments in 1838 were made to the following countries, namely:—France, 85,926 cwts., £371,363; East Indies, 65,780 cwts., £303,132; United States, 29,916 cwts., £140,722; Holland, 19,503 cwts., £86,369; Belgium, 10,496 cwts., £48,283; Germany, 7248 cwts., £36,617; Italy, 7609 cwts., £34,291; British West Indies, 6518 cwts., £36,628; Foreign West Indies, 4845 cwts., £23,552; British America, 5801 cwts., £29,672; Brazil, 5111 cwts., £25,595.

COPPERAS. [Vitriol.]

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CORAL (Fr. *Corail.* Ger. *Korallen.* It. *Corale.* Por. & Sp. *Coral.* Rus. *Korallii*), a submarine production, composed of the cells of minute creatures of the polypus kind (*Polypiara cortificera*, Lamarck), some species of which, after being polished and worked, are prized as ornaments of female dress. It is a hard, compact, stony body, furrowed, and in the form of plants, with warty excrescences; and is valued according to its size, solidity, and the depth and brilliancy of its colour. This is most commonly yellowish white; but it also occurs red and black,—the last being in general the most highly esteemed; there are, however, many varieties of each kind. It is found at different depths; and it is remarked that light exerts a powerful influence on its growth as well as its colour,—the tint being darker in proportion to the deepness of the sea. Coral abounds in various parts of the Mediterranean; the most profitable fisheries of it are those of Majorca, Minorca, Provence, and Sicily: the Sicilian one is chiefly followed by the Trapanese, who go for the purpose to Bona in Africa. In the eastern seas, it is chiefly found in the Arabian Gulf, the west coast of Sumatra, and in Japan. Some kinds of coralline bodies increase to an extraordinary size, forming immense banks or masses of submarine rocks, which are frequently dangerous to navigators.

CORD, a measure for firewood, so called because it was anciently measured by a cord. Its dimensions are stated to be eight feet in length, four feet in height, and four feet in breadth; and its weight 10 cwts. It is equal to 1000 billets.

CORDAGE. [CABLE. ROPE.]

CORDUROY, a fabric of cloth originally composed of silk, but now very extensively made in England of cotton. The common kind is of a plain body, a better is twilled in the back, and the best is twilled on both sides; but there is of each kind a variety of qualities. The usual colours are olive, drab, slate, fawn, and white. The material is no doubt important, but ductility, pile of a moderate height, and a clear colour, are also characteristics of good corduroy. It is in pieces varying in length from 40 to 70 yards.

CORIANDER-SEED is the fruit of an annual umbelliferous plant (*Coriandrum sativum*), found wild about Ipswich and in some parts of Essex. When fresh, their smell is strong and disagreeable, but by drying becomes sufficiently grateful. They are used in sweetmeats, in brewing, distilling, and in certain stomachic liqueurs; and in some countries in cookery.

CORK (Fr. *Liége*. Ger. *Kork*. It. *Sughero, Suvero*. Por. *Cortica de Sovreiro*. Sp. *Corcho*), the outer bark of a species of evergreen oak (*Quercus suber*), abundant in Portugal, Spain, especially Catalonia and Valencia, Italy, the south of France, Corsica, and other countries. This substance is in reality dead bark, and its removal is effected without injury. The tree is first barked in the fifteenth year of its growth, and this operation is repeated every eight or ten years afterwards. Cork is light, porous, compressible, and elastic. It should be chosen in fine layers or boards, not broken nor knotty, smooth when cut, and of moderate thickness. It is employed for stopping bottles and casks; as floats for nets; and for other purposes. The best white cork is grown in France, but this country is supplied almost exclusively from Portugal,—whence it is imported generally as dunnage in ships laden with wine. The annual consumption is now about 60,000 cwts.

CORN (Dan. *Korn*. Du. *Graanen, Koren*. Fr. *Bleds, Grains*. Ger. *Korn, Getreide*. It. *Biade, Grani*. Lat. *Frumentum*. Pol. *Zboze*. Por. *Graos*. Rus. *Chljeb*. Sp. *Granos*. Sw. *Säd, Spanmal*), means strictly "grain in the ear," or "grain unthrashed;" but in commerce the term is applied in a more comprehensive sense to all kinds of grain or pulse fit for food, in whatever state of preparation.

I. HISTORICAL SUMMARY OF THE ENGLISH CORN-LAWS.

Period prior to 1688.—The general tendency of early legislation was to restrict the exportation of corn, in order to ensure a sufficient supply of food for the people, while its importation was freely permitted. The first statute on record upon this subject is the 34th Edw. III. c. 20, passed in 1360-61, which prohibited exportation. In the succeeding reign, in 1394 (17 Rich. II. c. 7), a counter-law was enacted, allowing exportation on payment of "the subsidies and devoirs thereof due," except when prohibited by the king in council; a permission which was placed under more definite limitations in 1436 by the act 15 Hen. VI. c. 2, which declared the export of corn legal only when its price did not exceed 6s. 8d. per quarter for wheat, and 3s. per quarter for barley. This act was continued in 1441, and in 1444-45 it was rendered perpetual.

The first symptom of a protective corn-law was in 1463, when the importation of corn of foreign growth was prohibited unless the price of wheat should exceed 6s. 8d. the quarter, that of rye 4s., and that of barley 3s. From this we may conclude that the balance of prices had turned, and that, at least for a time, they were higher in England than in the neighbouring countries.

These laws, regulating the exportation and importation of corn, continued in force until 1534, when exportation was prohibited, except "by license under the king's great seal;" but it having been found impossible to enforce this law, it was thought that better success would attend the regulation than the prohibition of the trade, and accordingly the permission to export grain was restored in 1554, whenever the prices were at or under 6s. 8d. per quarter for wheat, 4s. for rye, and 3s. for barley. In 1562, these limits were enlarged; the wheat to 10s., the rye to 8s., and the barley to 6s. 8d.; and in 1571, it was enacted by the 13th Eliz. c. 13, that corn might be exported at certain specified duties at all times when no proclamation had been issued to the contrary. This act gave virtual freedom to the trade, as though the law of 1463 continued in existence, prohibiting importation while the price of wheat, rye, and barley should be under 6s. 8d., 4s., and 3s., respectively, the rates that had for some time prevailed rendered this law inoperative.

This system was continued in the succeeding reigns, but accompanied with various modifications, particularly as regards the prices at which export was permitted, which were from time to time enlarged, until in 1670 the shipment of wheat was allowed at any time when the price did not exceed 53s. 4d. per quarter. In order to keep the price at this high rate, heavy or rather prohibitory duties were at the same time imposed upon importation.

Besides thus trammeling the foreign trade in corn, our ancestors thought proper to impose restrictions upon the trade within the kingdom, under the impression that if the consumers could be brought to purchase immediately from the growers, the profits of intermediate corn-dealers would be saved,—and that the injurious effects of dearths, which then frequently occurred, were attributable to the practices of those dealers in buying up corn, and withdrawing it from market. In 1551, an act was passed declaring the buying of corn in one market with intent to sell it in another to be *engrossing*, an offence punishable with fine and imprisonment; and by a statute of Queen Elizabeth, no person was permitted to convey corn from one part of the kingdom to another without a license from the magistrates in quarter sessions. In 1624, these restrictions were considerably modified; and in 1675, the engrossing of corn was made legal whenever the price of wheat did not exceed 48s.[*]

Period of the Bounty System from 1688 *to* 1815.—The era of 1688 is as important in the history of our corn-laws as of our constitution. Not satisfied with the degree of favour obtained by the law of 1670, the landowners succeeded, in 1689, in procuring an act (1 Wm. & Mary, c. 12), which provided that whenever wheat in the home market should be at or below 48s., and barley at or below 24s., there should be allowed a bounty on export of 5s. a-quarter for wheat, and 2s. 6d. for barley. By a subsequent act, in 1700, every thing in the shape of duty on English corn was relinquished by the crown; and in 1707, on the legislative union with Scotland, the operation of the corn-laws was rendered uniform throughout Great Britain.

The grand argument brought forward in favour of the bounty law was its tendency to prevent a scarcity by inducing the farmers to raise a surplus stock of corn. If, however, as commonly alleged, the real view regarded an object more directly resulting from it, namely, the raising of the rent of land, the projectors of the law were disappointed. The result of the system was, as may naturally be conceived, a large exportation in abundant years; but it had not, on taking a comprehensive view of its operation, the effect of creating a general or permanent rise of prices. On comparing the 70 years which followed the enactment of the bounty with the 70 that preceded it, we shall find (*Wealth of Nations*, b. i. c. 11), that the price of wheat was considerably lower in the latter period; and there seems to be little doubt that by carrying cultivation at first too far, it had counteracted the intention for which it was framed. No progressive or constant rise was communicated to prices until after 1760, by which time the increase of our population began to be such as nearly to equal by their consumption the enlarged produce of the agriculturists. The rapid rise of price arising from this cause about ten years afterwards, induced government to resort at first to temporary prohibitions of export; but in 1773, the decisive step was taken of abrogating the bounty until our markets should fall below the price at which it was formerly allowed, namely, until wheat should be 44s. a-quarter, and barley 22s.; a measure which amounted virtually to its withdrawal. A more direct influence on the market, however, was effected by the abolition at the same time of the restraints on importation, which was now permitted at the nominal duty of 6d., so long as the home market should be at or above 48s. for wheat, and 24s. for barley. The object of these regulations was to maintain, as far as possible, a level rate of 48s., which the act assumed to be a fair price both for grower and consumer. This revolution in the law, though ascribed to the influence of Dr Smith and Mr Burke, arose more immediately from a consideration of the popular discontent attendant on the rapid advance of prices.

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[*] So lately as 1800, engrossing has been held to be an offence at common law, and a corn-dealer was convicted of it, though he was not brought up for judgment. "Those who still imagine," says Mr Buchanan, "that corn is artificially raised in price, would do well to consider that as the supply of provisions is liable to great variations, there must be some provision in the economy of nature for making a smaller supply last as long as a larger supply; that there is no way of thus regulating the consumption but by the price, and that it is, accordingly, in reference to this great object that the price is invariably fixed. It neither can be lowered nor increased but for the sake of more exactly suiting the daily and weekly waste to the supply of the year. If we suppose, for example, that thė supply falls in one year one-twelfth below the level of an average crop (which we know frequently happens), it would, if consumption were to go on at the ordinary rate, be consumed in the course of eleven months, leaving the last month wholly unprovided for. But this we know never happens, and it is only prevented by a rise of price, which measures the consumption by the deficiency of the crop; and whether, therefore, there is an abundant, middling, or scarce crop, a suitable allowance is sure to be measured out to the consumer, by a low, a middling, or a high price. The corn-dealer, indeed, thinks nothing about all this; his object is to sell his commodity at the highest price; and in a scarcity he takes his full advantage; but while he is thinking only of himself,—while he is only playing his own paltry game, he is a mere instrument in the hands of Him who brings good out of evil, and who turns the little passions of man to the purposes of his own benevolence and wisdom. There is really nothing in nature more wonderful than that great law of society by which subsistence is measured out in due proportion to the supply of the year; and the more deeply it is considered, the more worthy will it appear of profound and rational admiration." (*Buchanan's Edition of Wealth of Nations, note e*, vol. ii. p. 304.)

The landowners were loud in declaiming against this change,—ascribing to it that cessation in our exports which may be more justly attributed to the increased consumption attendant on an augmented population; and on the plea that the country might become dependent upon foreign states for food, this powerful class succeeded, in 1791, in procuring an act raising the price at which importation was allowed at 6d. per quarter, to 54s.; a duty of 2s. 6d. was imposed when the price was between 50s. and 54s.; and 24s. 3d. per quarter was charged when the price was below 50s. Under this act the maritime counties of England were divided into twelve districts, and importation and exportation in each were regulated by their respective prices.

In 1804, the price at which the prohibitory duty of 24s. 3d. was charged, was raised from 50s. to 63s.; between this last price and 66s., the duty was 2s. 6d.; and above 66s., it was 6d. per quarter. By this act, the mode of fixing the prices adopted in 1791 was altered, and the aggregate average of the twelve districts was taken as the measure for regulating importation and exportation.

In 1814 (54 Geo. III. c. 69), the bounty system was abolished; but it may be observed, that none could have been claimed at any time after 1792, in which particular year the average price was below that fixed in 1773.

Period from 1815 *to* 1828.—In 1815, a law (55 Geo. III. c. 26) was passed, after much opposition, and exciting great clamour, permitting the free importation of foreign corn to be warehoused, or re-exported, but forbidding the importation for consumption, unless the average prices were, for wheat, 80s.; for rye, pease, and beans, 53s.; for barley, 40s.; and for oats, 26s. Every kind might be brought from the colonies when the prices were, for wheat, 67s.; rye, pease, and beans, 44s.; barley, 33s.; and oats, 22s. Owing to deficient harvests in 1816 and 1817, prices were raised above these limits, and so much corn was imported free of duty, that a considerable surplus was left for future years. The harvest of 1822 was one of abundance, and during the next twelve months prices fell below what they had been since 1792. The projectors of the act of 1815 expected that its effect would have been to keep up wheat to about 80s. per quarter, but so far was this expectation from being realized, that, excepting in the years of scarcity already alluded to, the average price, up to 1828, when the system of prohibition was exchanged for that of a graduated duty, was only 58s. 5d.

Meantime, however, the law of 1815 was modified in 1823, so as to allow of importation whenever the price of wheat was 70s., for rye, pease, and beans, 46s., for barley, 35s., and for oats, 25s. per quarter, when a duty of 17s. was to be payable on wheat during the first three months of importation, and 12s. thereafter (and proportional rates for other grain); but prices were never such, during the continuance of this act, as to bring it into operation. In 1825, the importation of colonial wheat was permitted, upon payment of a duty of 5s. per quarter, without reference to the price in the British market. In the same year, another act was passed, permitting, until the 15th August, the entry of corn warehoused prior to May 1822 at a low duty; and in the following year, the apprehensions of a deficient harvest forced the government to the extraordinary step of having recourse to an order of council to admit 500,000 quarters of foreign wheat at an almost nominal rate of duty, in order, on the one hand, to alleviate the severity of the prohibitory system, and on the other, to prevent the opening of the ports, and the consequent probable admission of such a quantity of grain beyond the actual wants of the country as might have affected prices for a long period afterwards.

These indications of imperfection in the system, which admitted of alternate prohibition and unlimited importation, gave strength to the opinion that a better plan might be devised; and its inconvenience having at length been recognised by all parties, the act of 1828 founded upon a series of resolutions introduced by Mr Charles Grant (now Lord Glenelg), was passed, by which the trade has been since regulated.

II. Existing Regulations of the British Corn-trade.

These are embodied in the act 9 Geo. IV. c. 60 (15th July 1828), the principle of which is the constant freedom of importation, upon the payment of duties fluctuating according to the average price of grain, decreasing as the price advances, and increasing as the price falls.

§§ 1, 2. Repeal former acts.

§ 3. There shall be levied upon all corn entered for home consumption in the United Kingdom, from parts beyond seas, the duties specified in the subjoined table.

Shipments from Colonies, § 4. No corn shall be shipped from any British possession out of Europe, as being the produce of such possession, until the owner or shipper shall have subscribed, before the chief officer of customs at the port of shipment, a declaration specifying the quantity of each sort, and that the same was the produce of some B. P. out of Europe, to be named in such declaration, nor until such owner or shipper shall have obtained from such chief officer a certificate of the quantity so declared to be shipped. And before any corn shall be entered at any port in the U. K. as being the produce of any B. P. out of Europe, the master of the ship importing the same shall deliver to the chief officer of customs a copy of such declaration, certified by the chief officer of customs at the port of shipment before whom the same was made, together with the certificate signed by the said chief officer of customs of the quantity of corn so declared to be shipped; and such master shall also subscribe, before the chief officer of customs at the place of importation, a declaration that the several quantities of corn on board such ship, and proposed to be entered, are the same that were mentioned in the declaration and certificate produced by him, without any addition. Penalty for false statement, £100, with forfeiture of the corn.

Malt or Ground Corn, § 5. Not lawful to import for consumption into the U. K. any malt, or into Great Britain any corn ground, except wheatmeal and flour, and oatmeal, or into Ireland, any corn ground, under penalty of forfeiture.

Gazette Accounts, § 6. Accounts of corn imported, and in warehouse, to be published monthly, by the commissioners of customs, in the London Gazette.

Foreign Duties, &c. § 7. If any foreign state shall subject British vessels, goods, &c. to any higher duties or charges than are levied on the national vessels, &c. of such state, his Majesty may prohibit the importation of corn from such state.

Weekly Returns of Sales, § 8. In order to regulate the import duties on corn according to the average prices of British corn, provides that weekly returns of the purchases and sales of British corn shall be made from 150 towns in England and Wales, to an inspector.

Comptroller of Return, § 9-12.

London Inspector, § 13-17. To be appointed by Lord Mayor, &c. Dealers in corn ineligible.

Declaration by London Corn-factor, &c. § 18. Every corn-factor or agent within five miles from the Royal Exchange, and every dealer at Mark Lane, shall deliver to the Lord Mayor or Aldermen, a declaration that the returns of sales to be made by him shall be conformable to the act.

Returns to Corn-inspector, § 19. Every such factor and dealer shall return, on Wednesday in each week, to the inspector for London, an account, signed by him or his agent, of the quantities of each sort of British corn sold during the week, ending on and including the next preceding Tuesday, with the prices, the amount of every parcel, the total quantity and value of each sort, by what measure sold, and the names of the buyers, and of the persons for whom such corn was sold; and it shall be lawful for such inspector to require any person making or tendering such returns, to declare and set forth where, by whom, and in what manner, any such corn was delivered to the purchasers.

Provincial Inspectors, § 20-24. To be appointed by mayors in towns, and justices of peace in counties. Dealers ineligible; also those so engaged within preceding 12 months.

Declaration by Dealers in Provincial Towns, § 25. Every person who shall deal in British corn, or who shall in such town engage in the business of a corn-factor, miller, maltster, brewer, or distiller, or who shall be the owner of any stage-coaches, wagons, carts, or other carriages carrying goods or passengers for hire to and from any such town, and every person who, as merchant, clerk, agent, or otherwise, shall purchase at such town any British corn for sale, or for the sale of meal, flour, malt, or bread, made or to be made thereof, shall before so dealing, purchasing, or engaging himself, make and deliver a declaration (according to a form given in the act), that his returns shall in all respects be conformable to the provisions of the act; which declaration shall be delivered to the mayor, or chief magistrate, or to some justice of peace for such town, or for the county or division in which the same is situate, who are to deliver a certificate thereof to the inspector of corn returns.

Inspectors empowered to require such Declaration (§ 26) from any person buying and selling corn, not within the terms of the act specially required to make declaration.

Dealers to make Returns of Sales, § 27. All persons required to make declaration, shall, on the first market-day which shall be holden, in each week, in the town in which they respectively deal, return to the inspector for such town an account, signed by them, of the amount of every parcel of each respective sort of British corn bought during the week ending on and including the day next preceding such first market-day, with the price, by what measure bought, name of seller of each parcel, with the names of the person or persons, if any other than the person making such return, for or on account of whom the same was so bought or sold; and the inspector may deliver to any person tendering such return, a notice, requiring him to set forth where, by whom, and in what manner such corn was delivered.

Inspector not to include Returns before ascertaining that the Parties have made Declaration, § 28.

Inspectors to make Weekly Returns to Comptroller, § 29.

Weekly Averages, § 30. The average prices of all British corn, by which the said duties shall be regulated, shall be made up and computed on Thursday in each week, in manner following:—The comptroller shall, each Thursday, from the returns received by him during the preceding week, ending on and including the Saturday in such week, add the total quantities of each sort of British corn sold, and the total prices for which the same shall have been sold, and shall divide the latter by the former; and the sum produced thereby shall be added to the sums in like manner, produced in the five weeks immediately preceding the same, and the amount thereof being divided by six, will give the sum which shall be taken to be the aggregate average price of each sort of British corn respectively; and the comptroller shall publish such aggregate weekly averages in the next succeeding Gazette, and every Thursday transmit a certificate thereof to the chief officer of customs at each of the ports of the U. K.; and the duties to be paid shall from time to time be regulated at each of the ports, by the average aggregate prices of British corn at the time of the entry for home consumption, of any corn, grain, meal, or flour, chargeable with any such duty, as such aggregate average prices shall appear, and be stated in the last of such certificates, which shall have been received by the chief officer of customs at such port.

Imperial Measure (§ 31) to be used in computing quantities.

British Corn (§ 33) shall be deemed to be all grain the produce of the U. K.

Returns believed by Comptroller to be untrue (§ 36) shall be represented to the committee of the Privy Council, who may direct him to omit the same from the computation of average prices.

Penalties, § 42-46. Every person required to make and deliver declarations, who shall fail to do so in the manner directed, shall forfeit £20 for each month during which he shall neglect or delay to make and deliver any such declaration; and every person failing to make returns in the manner directed, shall, for such offence, forfeit £20. And persons making false or fraudulent returns, shall be guilty of a misdemeanour.

Limitation of Actions, § 48. Actions under this act must be brought within three months of matter done. Defendants may plead the general issue, and if judgment given against plaintiff, the former shall have treble costs.

DUTIES ON FOREIGN CORN ENTERED FOR HOME CONSUMPTION.

IF IMPORTED FROM ANY FOREIGN COUNTRY.

Average Price of British Corn.	Duty per qr. s.	Duty per qr. d.
Wheat.—61s. and under 62s. per qr....	25	8
For each 1s. under 61s., 1s. additional		
62s. and under 63s..................	24	8
63s. .. 64s..................	23	8
64s. .. 65s..................	22	8
65s. .. 66s..................	21	8
66s. .. 67s..................	20	8
67s. .. 68s..................	18	8
68s. .. 69s..................	16	8
69s. .. 70s..................	13	8
70s. .. 71s..................	10	8
71s. .. 72s..................	6	8
72s. .. 73s..................	2	8
And at or above 73s..................	1	0
Barley, Maize, Buck Wheat, Bear or Bigg.—32s. and under 33s. per qr..	13	10
And for each 1s. under 32s. such duty to be increased by 1s. 6d.		
33s. and under 34s..................	12	4
And for every additional 1s. from 33s. to 41s. such duty to be decreased by 1s. 6d.		
When at or above 41s..............	1	0

Average Price of British Corn.	Duty per qr. s.	Duty per qr. d.
Oats.—24s. and under 25s. per qr......	10	9
And for each 1s. under 24s. such duty to be increased by 1s. 6d.		
25s. and under 26s..................	9	3
And for every additional 1s. from 25s. to 31s. such duty to be decreased by 1s. 6d.		
At or above 31s..................	1	0
Rye, Pease, and Beans.—35s. and under 36s. per qr.	16	9
And for each 1s. under 35s. such duty to be increased by 1s. 6d.		
36s. and under 37s..................	15	6
And for every additional 1s. from 36s. to 46s. such duty to be decreased by 1s. 6d.		
At or above 46s..................	1	0
Wheatmeal and Flour, per barrel of 196 lbs.—Duty equal to that on 38½ gallons of wheat.		
Oatmeal, per quantity of 181½ lbs.—Duty equal to that on 1 quarter of oats.		

IF PRODUCE OF, AND IMPORTED FROM, ANY BRITISH POSSESSION OUT OF EUROPE.

Average Price of British Corn.	Duty per qr. s.	Duty per qr. d.
Wheat.—Until British wheat be 67s. ..	5	0
When at or above 67s. per qr........	0	6
Barley, Maize, Buck Wheat, Bear or Bigg.—Until British barley be 34s..............................	2	6
When at or above 34s. per qr.	0	6
Oats.—Until British oats be 25s.	2	0
When at or above 25s. per qr.	0	6

Average Price of British Corn.	Duty per qr. s.	Duty per qr. d.
Rye, Pease, and Beans.—Until British rye, pease, or beans be 41s..	3	0
When at or above 41s. per qr.	0	6
Wheatmeal and Flour, per barrel of 196 lbs.—Duty equal to that on 38½ gallons of wheat.		
Oatmeal, per quantity of 181½ lbs.—Duty equal to that on 1 quarter of oats.		

III. STATISTICS OF THE CORN-TRADE.

In presenting a brief summary of the progress of this branch of industry in the United Kingdom, we deem it unnecessary to go farther back than the year 1760, partly from the imperfect nature of the statistical materials previously in existence, but chiefly from the circumstance that it is from that period we may date the great development of manufactures, and commerce, and increase of town population, which caused Great Britain to become an importing instead of an exporting country for corn. Taking decennial periods, we find that, in the first ten years, 1760-1769, when the average population of England (including Wales) was 6,850,000, the quantity of wheat produced exceeded the consumption by 1,384,561 quarters,—a quantity so nearly equal to the wants of the people, that the deficient harvests of 1767 and 1768 occasioned the importation of 834,669 quarters. The average price during this period is estimated by Mr Porter at 37s. per quarter,—a price which appears to have given a stimulus to agriculture, as the number of inclosure bills passed was 385. In the second period, 1770-1779, when the mean population had advanced to 7,520,000, we find five years of export and five of import,—the imports rather preponderating in quantity. In this period the average price of wheat, according to the London Gazette, was 45s. per quarter, and the number of inclosure bills was increased to 660. In the next period, 1780-1789, six were years of export, and four were years of import; but the excess of the imports of wheat was only 233,502 quarters,—the supply being thus nearly on a level with the consumption of the people, the mean number of which now reached 8,170,000. In this period, the average price was 45s. 9d., having once been as high as 52s. 8d.; the number of inclosure bills, however, fell off to 246.

In the ten years from 1790 to 1799, England ceased to be an exporting country; the last shipments of wheat having been, as already noticed, in 1792, when the price fell to 41s. 9d. War immediately followed; and a series of deficient harvests began in 1795, which forced up prices, and led to the passing of an increased number of inclosure bills. The deficiency extended to a positive dearth in the first two years of the next decennary period, 1800-1809; and the price of wheat having been raised to the unprecedented height of 115s. 11d. per quarter, a great additional quantity of land was brought under the plough.

In 1809, another deficient harvest occurred, and, notwithstanding the importation of 1,500,000 quarters of wheat, the average price of 1810 was 103s. 3d., reckoned in the depreciated currency, or about 90s. if estimated in gold. In 1812, it advanced to 122s., equal to about 100s. in gold,—a price so high as to cause the application of so much additional capital to land, that no fewer than 133 inclosure bills were passed in this year, being the largest number on record in any one session. This stimulus being continued, led to an increased production, which, joined to the diminished expense of importation consequent on the return of peace, caused so great a reaction that the average price of wheat in 1814 fell to a rate which, measured in gold, was only about 54s. per quarter. The cry of "agricultural distress" having in consequence become urgent, Parliament was induced to pass the act of 1815, securing the monopoly of the home market to the British grower, until the average price of wheat should reach 80s. In the ten years 1810-1819, no fewer than 853 inclosure bills were passed; but between 1820 and 1830, the number was only 205. This diminution was partly owing, no doubt, to the circumstance of the previous inclosures having greatly reduced the quantity of waste land fitted to be brought into cultivation, but it is in a much higher degree attributable to the fact, that a larger amount of produce has of late been drawn, especially in the northern counties, from the same portion of ground, than was obtained in general at the beginning of the century,—an improvement which has been effected by the more complete drainage of the land, the adoption of better rotations, the enforcement of greater economy in the management of details, and other causes. This improvement is not universally admitted by the landowners, many of whom contend that, owing to the fall of prices, agriculture has materially declined since 1815, and in particular since 1820; but though this fall has certainly involved many in difficulties, there is still incontestable evidence to show that the agriculture of the kingdom generally, so far from declining, has made an astonishing progress since 1815. In illustration of this position, Mr Porter, in his valuable "*Progress of the Nation*" (sec. 2, c. 1, p. 171), exhibits the proportionally decreasing quantities of land brought into use from 1801 to 1835 in contrast with the increase of the population during the same period in the United Kingdom as follows:—

	Inclosure Bills.	Acres.	Increase of Population.
1801 to 1810	906	1,657,980	2,209,618
1811 to 1820	771	1,410,930	2,645,738
1821 to 1830	186	340,380	3,113,261
1831 to 1835	56	102,480	1,458,403

In the period from 1820 to 1835 there was no increase worth mentioning in the quantity of foreign corn entered for home consumption as compared with the previous ten years, while there can be no doubt that the bulk of the population now consume more corn, and particularly wheat, than at any former period. We are therefore brought irresistibly to the conclusion that a very great increase of produce must have taken place. According to the estimates adopted by Mr Porter, "10,000 acres of arable and pasture land, which, as cultivated in 1801, supported 4327 inhabitants, do, at the present day, owing to the improvements brought about in the art of agriculture, support 5555 inhabitants;" being an increase of about ¼th or 25 per cent. in this period. Again, if we compare the present state of the agricultural class with their condition before the last war, a still more advantageous contrast is exhibited. "With scarcely any exception," says he, "the revenue drawn, in the form of rent, from the ownership of the soil, has been at least doubled in every part of Great Britain since 1790. This is not a random assertion, but, as regards many counties of England, can be proved by the testimony of living witnesses, while in Scotland the fact is notorious to the whole population."

No means have been hitherto devised for ascertaining the actual produce of corn in this country. But looking to the statements of the best authorities, and allowing for the circumstance that nearly one-half of the population of Ireland live chiefly upon potatoes, the average annual produce of grain of all kinds, in the United Kingdom, may be estimated at about 56,000,000 quarters. Deducting one-seventh for seed, there remains 48,000,000 quarters for consumption as food, and otherwise. Adding to this the annual importation from abroad, which on an average of the 12 years from 1829 to 1840, inclusive, was 1,685,607 quarters, makes the total yearly consumption about fifty millions of quarters, or nearly one million of quarters a-week; of this upwards of one-fourth may be estimated to consist of wheat.

The extent to which the potato is used as food in Ireland allows a considerable quantity of grain, the produce of that part of the kingdom, to be sent to Great Britain. The quantity thus exported has (as shown in Table, No. I.) increased from between 300,000 and 400,000 quarters yearly, to about 3,000,000 quarters since the commencement of the present century. It chiefly consists of oats; this grain forming about five-sevenths of the whole, while the wheat is only about one-sixth. The shipments take place chiefly at the ports of Waterford, Limerick, Cork, Dublin, and Drogheda; large quantities are also sent from Wexford, Galway, Newry, Dundalk, Sligo, Londonderry, and Newport. The principal ports at which those shipments are received in Great Britain are Liverpool (about 450,000 quarters grain, and 1,200,000 cwts. meal and flour), London (from 600,000 to 900,000 quarters grain), and Glasgow (nearly 400,000 quarters grain, and 300,000 cwts. meal and flour); but a considerable share of this trade is likewise possessed by Bristol, Portsmouth, Gloucester, Southampton, Cardiff, Swansea, and Lancaster. (*Par. Paper*, 1839, No. 27.)

The chief seat of the British trade is London, where a great weekly market is held every Monday at the Corn Exchange, Mark Lane; Wednesdays and Fridays being also business days. The quantity of British grain annually brought coastwise to London is nearly 1,500,000 quarters, besides about 1,000,000 cwts. meal and flour; the shipments from thence, however, are trifling. The other ports which participate most largely in the coasting-trade in British corn, are, in respect to exports,—Yarmouth, Ipswich, Maldon, Lynn, Harwich, Colchester, Stockton, Berwick, Aberdeen, Montrose, and Banff; and in respect to imports,—Liverpool, Goole, and Hull, Newcastle, Bristol, Leith, Grangemouth, and Glasgow. The total quantity annually sent coastwise is about 3,500,000 quarters, besides nearly 2,000,000 cwts. flour and meal.

The total quantity of British wheat sold in the 150 towns from which returns are made to the Corn-office was, in the year 1829, 2,576,129 quarters; in 1834, 3,768,602 quarters; and in 1838, 4,064,305 quarters.

From the annexed accounts it will be seen that the foreign supplies are principally received from the north of Europe, especially Prussia, or rather Prussian Poland, the produce of which is brought down the Vistula on rafts to Dantzic, the chief port of shipment. The price of the wheat exported from this port averages rather higher than at other places, but this difference is more than counterbalanced by the superiority of its quality, which is nearly equal to the English, the "best white" or "high mixed" being indeed superior to our best. Hamburg is likewise an important grain market, being an emporium for the produce of the extensive countries watered by the Elbe, as well as for large quantities of Baltic corn. The chief other exporting ports in the north of Europe are Konigsberg, Riga, Petersburg, Rostock, and Rotterdam. In the south of Europe, the only great shipping port is Odessa; but it is unlikely that any considerable quantity will be ever imported from thence to Great Britain, as, owing to the distance between the two places, it is essential, to preserve the wheat in condition and from heating, that the voyage should be undertaken in winter. A fuller account of the corn-trade at these places will be found under the heads PRUSSIA, HAMBURG, RUSSIA, MECKLENBURG, and HOLLAND.

The quantity of foreign corn entered for home consumption varies of course according to the productiveness of our harvest. In 1833, it was only 110,307 quarters; while, in 1839, it amounted to no less than 4,632,261 quarters, being the largest supply ever introduced into this country in any one year. The latter quantity must have constituted a very considerable proportion of the grain brought to our markets in 1839, as, besides the great deficiency in the harvest of the previous year, it must be borne in mind that a portion of the produce of this country, which has been variously estimated at from a half to two-thirds of the whole, is never brought for sale, but is consumed in the agricultural districts, and employed as seed. Its influence in checking prices must also have been considerable; for, as we have elsewhere shown [PRICE], the natural effect of a deficiency in the supply of so necessary an article as corn, is to produce a more than equivalent rise in its price.

An account of the varieties and qualities of the different kinds of grain will be found under the heads WHEAT, OATS, BARLEY, &c.

No. I. STATEMENT of the Quantities of Irish Grain (principally Oats) imported into Great Britain in each Year from 5th January 1800 to 5th January 1840.

Yrs.	Quarters.	Yrs.	Quarters.	Yrs.	Quarters.	Yrs.	Quarters.	Yrs.	Quarters.	Yrs.	Quarters.
1800	3,238	1807	463,195	1814	812,462	1821	1,822,816	1828	2,826,590	1835	2,679,438
1801	525	1808	656,770	1815	821,192	1822	1,063,089	1829	2,307,244	1836	2,958,272
1802	461,371	1809	932,478	1816	873,865	1823	1,528,153	1830	2,215,521	1837	3,030,293
1803	343,547	1810	631,227	1817	695,651	1824	1,634,000	1831	2,429,182	1838	3,474,302
1804	316,958	1811	429,867	1818	1,204,733	1825	2,203,962	1832	2,990,767	1839	2,243,149
1805	306,924	1812	597,356	1819	967,680	1826	1,693,392	1833	2,737,441	1840	2,327,966
1806	466,760	1813	977,164	1820	1,415,722	1827	1,828,460	1834	2,792,658		

The quantities of the different kinds imported from Ireland in 1839 were as follows:—Oats, 1,321,348 quarters, and oatmeal, 917,061 cwt. (equivalent, at 176 lbs. per quarter, to 583,584 quarters grain); wheat, 98,473 quarters, and flour, 559,504 cwt. (equivalent, at 392 lbs. per quarter, to 159,858 quarters grain); barley, including bear or bigg, 61,675 quarters; rye, 2331 quarters; pease, 1484 quarters; beans, 11,535 quarters; malt, 2861 quarters; in all, 2,243,149 quarters as above.*

No. II. ACCOUNT of the Quantities of Foreign and Colonial Wheat imported; the average price of British Wheat, according to the London Gazette; and the nature of the Crops from 1800 to 1828 inclusive.

Year.	Nature of Crop.	Price.		Quarters.	Year.	Nature of Crop.	Price.		Quarters.
		s.	d.				s.	d.	
1800	Bad	110	5	1,242,507	1815	Full average	63	8	....
1801	Good	115	11	1,396,359	1816	Scarcity	76	2	225,263
1802	Average	67	9	498,359	1817	Not above average	94	0	1,020,949
1803		57	1	297,145	1818		83	8	1,593,518
1804	Deficient	60	5	398,067	1819	Rather below average	72	3	122,133
1805	Average	87	1	842,879	1820	Above average	65	10	34,274
1806		76	9	280,776	1821	Average	54	5	2
1807		73	1	379,833	1822		43	3	....
1808	Partial deficiency	78	11	....	1823	Below average	51	9	12,137
1809	Scarcity	94	5	424,709	1824	Average	62	0	15,777
1810	Good crop	103	3	1,491,341	1825	Nearly average	66	6	525,231
1811	Deficiency	92	5	238,366	1826	Average	56	11	315,892
1812	Favourable	122	8	244,385	1827		56	9	572,733
1813		106	6	425,559	1828	Scarcity	60	5	842,050
1814	Nearly average	72	1	681,333					

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* In charging duties, and in conversions in the public accounts, the following quantities of flour or meal are respectively deemed to be equivalent to one imperial quarter of grain; namely, wheat-meal or flour, 392 lbs.; barley-meal, bean-meal, and meal of maize or Indian corn, 384 lbs.; rye-meal, 424 lbs.; and oatmeal, 176 lbs.

In converting the weight of grain into measure, the rule adopted in the accounts of the Board of Trade, is that laid down in the act 1 & 2 Geo. IV. c. 87, § 37, according to which, 57 lbs. wheat, 55 lbs. rye, 49 lbs. barley, 42 lbs. bear or bigg, and 38 lbs. oats, are respectively deemed to be equal to 1 Winchester bushel. These proportions give the following equivalents to 1 imperial quarter, namely, 470·37 lbs. wheat, 453·87 lbs. rye, 404·35 lbs. barley, 346·59 lbs. bear or bigg, and 313·58 lbs. oats.

The Irish barrel of wheat, pease, beans, and rye, equal 20 stones, each of 14 lbs. avoirdupois; the barrel of barley, bear, and rapeseed, equal 16 stones; the barrel of oats generally equal 14 stones; and the barrel of malt, 12 stones.

No. III. **Statement** of the Quantities of Foreign and Colonial Corn entered for Home Consumption in the United Kingdom; the Imports from Ireland into Great Britain; the average Prices of British Wheat, Oats, and Barley, according to the London Gazette; and the Nature of the Crop for each Year, from 1829 to 1840 inclusive.

Year.	Nature of Crop.	Average Prices per Quarter.						Foreign & Colonial Grain entered for Consumption.		Imports from Ireland into Great Britain.	
		Wheat.		Barley.		Oats.		Wheat.	Other Grain.	Wheat.	Other Grain.
		s.	d.	s.	d.	s.	d.	Qrs.	Qrs.	Qrs.	Qrs.
1829	Average	66	3	32	6	22	9	1,379,174	579,829	519,017	1,788,227
1830	Full average	64	3	32	7	24	5	1,711,876	1,039,291	529,717	1,685,804
1831	Nearly average	66	4	38	0	25	4	1,510,486	1,069,833	557,498	1,871,684
1832	Above average	58	8	33	1	20	5	376,638	116,394	790,293	2,200,474
1833		52	11	27	6	18	5	84,037	26,270	844,211	1,893,230
1834		46	2	29	0	20	11	64,975	168,955	779,505	2,013,153
1835	Abundant	39	4	29	11	22	0	28,555	408,342	661,776	2,017,662
1836	Above average	48	6	32	10	23	1	30,108	377,346	598,757	2,359,515
1837	Under average	55	10	30	4	23	1	244,275	595,648	534,465	2,495,828
1838	Scarcity	64	7	31	5	22	5	1,848,477	90,771	542,583	2,931,719
1839	Under average	70	9	39	6	25	11	2,711,309	1,920,952	258,331	1,984,818
1840	Average	66	4	36	5	25	8	2,401,367	1,442,378	174,440	2,153,526

No. IV. **Statement** of the Quantities of Foreign and Colonial Corn Imported, Re-exported, and Entered for Consumption, in each of the Years from 1829 to 1839, inclusive; also of the Quantities remaining in the Bonded Warehouses of the United Kingdom at the end of each of the said Years respectively.

	1829.		1830.		1831.	
	Wheat.	Other Grain.	Wheat.	Other Grain.	Wheat.	Other Grain.
Imported from	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.
North of Europe	1,242,346	942,848	1,289,668	722,716	1,070,309	1,121,520
South of Europe	275,551	19,726	93,200	15,702	533,435	39,507
British America	5,650	1,677	76,654	2,647	218,329	7,038
United States	113,818	140	184,299	....	464,793	2,466
Other places	34,574	7,229	34,121	8,379	32,620	1,389
Total	1,671,939	971,620	1,677,942	749,444	2,319,486	1,171,920
Re-exported	72,376	79,138	34,698	63,510	63,073	43,545
Entered for consumption	1,379,174	579,829	1,711,876	1,039,291	1,510,486	1,069,833
In warehouse	247,752	—	154,367	—	901,445	309,537

	1832.		1833.		1834.	
	Wheat.	Other Grain.	Wheat.	Other Grain.	Wheat.	Other Grain.
Imported from	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.
North of Europe	287,447	162,925	171,962	145,874	99,526	377,341
South of Europe	5,642	7,432	852	4,771	2	1,216
British America	103,468	8	100,557	10	56,446	283
United States	39,117	2	10,188	6	9,993	....
Other places	28,384	782	39,024	12	36,076	1,007
Total	464,058	171,149	322,583	150,673	202,043	379,847
Re-exported	288,189	112,842	93,768	25,603	159,499	24,583
Entered for consumption	376,638	116,394	84,037	26,270	64,975	168,955
In warehouse	702,293	268,544	822,852	365,926	774,185	548,064

	1835.		1836.		1837.	
	Wheat.	Other Grain.	Wheat.	Other Grain.	Wheat.	Other Grain.
Imported from	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.
North of Europe	39,281	238,763	227,294	391,328	525,496	721,122
South of Europe	2,174	25	1,611	567	12,623	29,847
British America	17,107	650	5,150	4	2,722	9
United States	1,945	....	338	....	37	....
Other places	28,528	22	28,681	621	37,437	817
Total	89,035	239,460	263,074	392,520	578,315	751,794
Re-exported	132,223	79,875	255,037	80,082	308,192	68,267
Entered for consumption	28,555	408,342	30,108	377,346	244,275	595,646
In warehouse	681,158	304,169	631,442	241,044	644,671	332,812

	1838.			1839.		
	Wheat.	Oats.	Other Grain.	Wheat.	Oats.	Other Grain.
Imported from	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.
Russia	41,408	10,229	1,994	372,820	316,823	35,472
Denmark	133,566	4,139	23,888	207,986	46,235	25[illegible],173
Prussia	586,003	199	10,416	767,735	99,521	350,5[illegible]7
Germany	350,139	16,816	55,788	428,737	75,010	142,8[illegible]3
Holland	82,011	23,688	4,9[illegible]7	116,901	101,336	38,336
Belgium	18,437	468	1,648	24,873	21,196	6,884
France	60,831	....	784	311,182	5,640	135,644
Spain	421	....	7	17,794	....	601
Italy	31,006	....	....	341,180	....	8
Malta	11,647	....	....	16,370	....	1,660
Ionian Islands	5,370	....	....	13,928	....	....
Turkey	3,150	....	....	43,757	....	1,772
East Indies	5,404	4	56	5,011	....	36
British America	11,356	....	40	7,769	....	279
United States	6,141	....	14	127,406	....	....
Channel Islands	41,545	1,427	4,184	46,353	452	7,640
Other places	892	....	2,745	40,052	3,904	4,996
Total	1,389,327	56,970	106,471	2,889,854	670,117	982,901
Re-exported	156,105	54,424	31,286	10,882	40,205	7,256
Entered for consumption	1,848,477	11,005	79,766	2,711,309	864,940	1,056,71[illegible]
In warehouse	25,729	242,188	69,044	175,966	15,835	8,7[illegible]6

No. V. A Return of the Highest and Lowest Prices of Wheat, and the Difference per Cent., in each of the Years from 1829 to 1838 inclusive, in England and Dantzic. (*Par. Paper*, 1840, No. 177.)

Years.	England.					Dantzic.				
	Lowest.		Highest.		Differ. per Cent.	Lowest.		Highest.		Differ. per Cent.
	s.	d.	s.	d.		s.	d.	s.	d.	
1829	55	4	75	11	37·	30	8	60	1	96·
1830	55	5	74	11	35·	29	9	48	2	62·
1831	59	2	75	1	27·	40	2	49	6	23·
1832	51	3	63	7	24·	28	10	42	6	47·
1833	49	2	56	5	14·	26	4	32	0	21·
1834	40	6	49	6	22·	23	2	28	6	23·
1835	36	0	44	0	22·	20	1	24	11	23·
1836	36	0	61	9	68·	21	10	34	10	59·
1837	51	0	60	1	17·	23	2	33	11	36·
1838	52	4	78	4	50·	24	1	61	2	154·

No. VI. Account of the Total Quantity of Foreign and Colonial Wheat and other Grain and Pulse entered for Home Consumption in the United Kingdom, from the time (15th July 1828) the Act 9 Geo. IV. cap. 60, came into operation, to the 5th day of January 1839; the Total Amount of Duty received thereon; and showing what that Duty was equal to per Imperial Quarter on the Aggregate Average of all this Period.

	Foreign Produce.			Colonial Produce.		
	Quantities charged with Duty for Home Consumption.	Amount of Duty received.	Average rates of Duty.	Quantities charged with Duty for Home Consumption.	Amount of Duty received.	Average rates of Duty.
	Qrs.	£	Per Qr.	Qr	£	Per Qr.
Wheat	6,777,620	2,039,115	6s. 0d.	519,530	98,121	3s. 9d.
Barley	1,389,962	414,921	6 0	314	23	1 6
Oats	2,138,584	766,429	7 2	8,977	295	0 8
Rye	164,885	35,546	4 4	....	....	....
Pease	475,922	176,920	7 5	6,592	635	1 11
Beans	550,616	265,776	9 8	....	....	....
Indian Corn	102,713	19,271	3 9	5,482	384	1 5
Buck Wheat	37,361	11,906	6 4	....	....	....
	Cwts.		Per Cwt.	Cwts.		Per Cwt.
Wheatmeal & Flour	2,215,037	191,978	1 9	595,745	41,622	1 5
Oatmeal	177	52	5 11	1,843	78	0 10

IV. General Observations.

The inequality of the seasons is one of those obvious facts which force themselves upon the attention of all. Equally so is the fact, that this inequality is greater in a small than in a large district; and that, other things remaining the same, in proportion as the territory which supplies subsistence is extended, the difference in the productiveness of the seasons will be lessened. It is thus that, by leaving the domestic trade of a kingdom unshackled, the deficiency of one district is, in a year of scanty harvest, compensated in a greater or less degree by the comparative abundance of another; while the pressure is equalised throughout the year by the spontaneous operations of the corn-dealer, which force the people upon that timely economy in the consumption of food, which, from ignorance or improvidence, they might otherwise fail to adopt. But the merchant who equalises the supply of subsistence through all the countries of the world, performs, though on a grander scale, and in a more accurate manner, functions precisely analogous to those discharged by the domestic dealer,—in a manner more accurate, because the irregularity of the seasons in any territory is in an inverse ratio to its extent. On the same grounds, it is obvious that prices must be always variable in a limited market, and steady in proportion as the market is extended.

These principles, however, in so far as they relate to foreign trade, have seldom been allowed to exercise an unfettered influence over national policy. In this country, the exportation of corn was at one time prohibited; at another it was encouraged by a bounty; while at a third its importation was subjected to restriction. The last, the existing practice, being one about whose expediency opinion is at present much divided, we propose to state briefly the grounds upon which it is maintained, and the objections that are commonly urged against it.

The policy of restraining importation professes to have in view two objects:—1*st*. To render the country independent of foreign supplies; 2*d*. To protect and encourage agriculture.

1*st*. The first object was much insisted on in 1815, in consequence of the estranged position in which Great Britain had stood in reference to other countries during a considerable part of the last war; and it is still maintained, though perhaps less strongly than formerly. The opponents of the corn-law, however, urge that such a combination of foreign powers as should render importation impossible, or even difficult, is a contingency scarcely conceivable, and totally at variance with the experience of those countries, especially Holland, that have adopted a different policy: That it is even opposed to our own experience, in as far as we have been for many years in part dependent on other countries; a large portion indeed of the grain imported in 1810, in consequence of the deficient harvest of 1809, having been brought from France in the midst of war: Moreover, that we import from foreign countries cotton-wool and other materials necessary in manufactures, affording employment and subsistence to several millions of our population, but that the interests and feelings created and sustained through means of such transactions, instead of being adverse to political security, are the surest guarantees of prosperity and peace.

2*d*. The duty on grain, considered in reference to the protection of British corn-growers, is to be viewed partly as a countervailing duty for their peculiar burdens, and partly as having for its object the securing to them of the home market.

(1.) The principal burdens imposed on the agriculturists exclusively, or in a higher degree than on others, are stated to be tithe and poor-rate, the countervailing duty for which is estimated by Mr M'Culloch at 5s. or 5s. 6d. a-quarter on wheat; namely, 3s. 6d. for tithe, and from 1s. 6d. to 2s. for poor-rate. On the other hand, it is urged by many that the agriculturists are not subjected to greater taxation than other classes, more especially since the late alteration of the poor-law, but that the contrary is the case, all the direct public taxes affecting the occupation of the farmer having been repealed; also that land is proportionally less burdened in Great Britain than in most other countries: Farther, that even admitting any such extra taxation to exist, it is much more than counterbalanced by the charges attending the importation of so bulky and perishable an article as corn.

(2.) The surplus of duty on foreign grain beyond the peculiar burdens of the British corn-growers, is levied with the view of securing to them a preference in the home market, similar to the legislative privilege in this respect enjoyed by other branches of industry; and they maintain that, having laid out much capital on the faith of the continued existence of the present state of things, they are entitled to expect that it shall not be speedily altered. To this it is answered—That the "protection" of agriculture gives an enhanced value to the prime necessary of life; a circumstance eminently injurious to the general body of consumers, and particularly to the manufacturers, who, while the cost of food is thus artificially raised, are engaged with foreigners in an arduous competition, the effect of which is to reduce profits and wages to the same level, whether on the Continent or in England: That the views entertained by the landowners themselves, as to their suffering from a change of the existing law, are exaggerated, if not unfounded; while, in the opinion of many, instead of being benefited they have been directly injured by the restrictive system, which, by holding out a fancied security, has led only to continued alternations of over-production, "agricultural distress," and short supplies.

These observations have reference solely to the principle of a restrictive corn-law. Whether, holding that a duty should be imposed, the present scale is injurious from its varying character, is no less a subject of controversy. The principal advantage expected from the sliding duty was, that it would tend to preserve uniformity of prices. But the extremes in the weekly averages, since it was introduced, have been 36s. in December 1835, and 81s. 6d. in January 1839,—a difference of 126 per cent. Again, a graduated duty which fluctuates with the variations of price, can never be appreciated beforehand, and is, as is well known, a fertile source of delusion. Thus, suppose a merchant commissions a cargo of foreign wheat when the home price is 71s., and when, of course, the duty is 6s. 8d.; and suppose, at the same time, that when he brings his wheat to market the price has fallen 3s., that is, to 68s., he will in such case (besides losing by the fall of price) have to pay a duty of 16s. 8d., or 10s. a-quarter more than his estimate. In the case of a rising market, the advantage, it is true, will be on the side of the corn-merchant; but a law which thus adds to the loss of an unsuccessful and to the profit of a successful speculation cannot be deemed beneficial. An equal degree of uncertainty is communicated to the operations of the foreign grower, who, of consequence, limits his produce to the market upon which he can fairly calculate. In this way, the graduated duty prevents that early importation of grain which merchants would have recourse to even in the distant prospect of a scarcity, and leads to its being delayed until after the emergency has arisen, and when the payment of its price cannot be effected by shipments in the ordinary course of trade, but must be made suddenly in bullion,—a circumstance which generally leads to a pecuniary crisis. Such a crisis occurred, as is well known, in the sudden exportation of bullion to an immense amount in 1839, which led to the convulsion of the money-market, much distress in trade, and the narrow escape of the Bank of England from a suspension of specie payments.

No one can doubt the necessity of approaching with caution any alteration of the laws affecting so important a branch of industry as agriculture, because any great shock given to the corn-growers would be at the least as hurtful to others as to themselves. But it is the opinion of many eminent authorities, that the interests of all classes would be consulted by changing the present system for that of a fixed duty. And that this need not be high, in order to ensure safety to the landowner, may be inferred from the facts that, taking a series of years, the average price of wheat at Dantzic (the cheapest exporting port) is not under 35s., while, in the event of a demand from this country, it invariably rises to 40s. and upwards; and that the charges of transport, exclusive of the importer's profit, are fully 10s. a-quarter.* A moderate duty added, therefore, would obviously afford ample protection, more especially when it is considered that the average price of wheat in England, during the six years ending with 1837, was only 50s. 3d. a-quarter; while, during the ten years ending with 1840, it was not more than 56s. 11¼d.; and that, during the greater portion of this period, cultivation was never carried on with more spirit or success. Landlords should also keep in view that high rents do not altogether depend upon high prices; for the additions to the present, compared with the former rent-rolls, have been much greater than can be accounted for by the advance in the price of corn. This is owing to various circumstances,—to increased population and wealth,—to the better adapted application of capital to land, to greater economy, and to the progress of agricultural science. These causes of a rise of rents are still in action, and will continue to be so even with additional efficiency; and their progress will of course still further remove all chance of inconvenience from a modification of the present system.

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* "The charges, in ordinary times," says Mr Porter of the Board of Trade, "of merely transporting a quarter of wheat from the north of Germany and the lower ports of the Baltic to England, are stated, on good authority, to be 10s. 6d., in addition to all the charges on shipping; and I am assured that, in order to get back in London the cost of a quarter of wheat bought in the Dantzic market, with the lowest rate of mercantile profit, it must be sold at an advance of 18s. upon the original cost." (*Effects of Restrictions on the Importation of Corn*, p. 27.)

CORNELIAN. [CARNELIAN.]

COROMANDEL-WOOD, the produce of a tree of great size, is used in cabinet work, like zebra and rose wood. But it is inferior to the last in the brilliancy and division of its colours, having a dingy ground, and sometimes running into white streaks.

CORUNDUM. [ADAMANTINE SPAR.]

CORVETTE (Fr.), a small vessel of war, usually carrying from 10 to 20 guns.

COSS, also called the *Cos*, *Cros*, *Crosa*, and *Hardary*, is an Indian itinerary measure, which varies in different places. It is generally distinguished into the *standard cos* and the *common cos;* the former is deduced from its proportion to a degree of the meridian, the latter rests on popular computation. Thus the standard cos is, in some places, 35 to a degree; in others, 37½, 40, and 45; while the common cos varies from 1 to 2½ British miles. In the map of Central India prefixed to Sir John Malcolm's Memoir, 42 cosses are reckoned to 1 degree. The Bengal cos of 1000 fathoms = 1 Brit. mile 1 furlong 3 poles and 3½ yards.

COTTON-WOOL, OR COTTON (Dan. *Bomuld.* Du. *Boomwol*, *Katoen.* Fr. *Coton.* Ger. *Baumwolle.* It. *Bambagia*, *Cotone.* Por. *Algodao.* Rus. *Chlobts-chataja Bumaga.* Sw. *Bomull.* Sp. *Algodon.* Hindus. *Rŭhi.* Malay, *Kapas*), a vegetable hair, or filamentous down, enveloping the seeds of different species of *Gossypium*, a plant growing in warm climates, and indigenous to India and America. It is produced within pods which protect it from injury by dust or weather, until it is ripe and fit to be gathered, when the heat of the sun causes it to expand and burst open the pod. It is of a white or yellowish-white hue, possesses downy softness and warmth, and its delicate fibres are sufficiently long, flexible, and tenacious to admit of being spun into a fine thread. The usual distinctions of the plant are, 1*st*, *Tree Cotton;* 2*d*, *Shrub Cotton;* 3*d*, *Herbaceous Cotton;* of each of which there are several kinds,—the plant having a great tendency to run out into varieties.

1*st*, Tree Cotton (*G. Arboreum*) is found in India, China, Egypt, the western coast of Africa, and in some parts of America. It only attains the height of from 12 to 20 feet; but another cotton-bearing tree (*Bombax ceiba*), seen in the West Indies and elsewhere, called familiarly the *umbrella tree*, attains the height of 100 feet. The produce of the latter, however, is of so short and brittle a fibre, that it is unfit for spinning or any other purpose, except stuffing pillows and beds.

2*d*, Shrub Cotton (*G. religiosum*) occurs in one or other of its varieties throughout the tropical parts of Asia, Africa, and America. In appearance it resembles a currant bush. Its duration varies according to the climate; in the hottest countries it is a perennial, while in cooler places it becomes an annual. In the former, two crops a-year are gathered, one from October to December, the other from February to April. The Guiana, Brazil, and most of the West India cotton is of this kind; the whole being also long stapled.

3*d*, Herbaceous Cotton (*G. herbaceum*), by far the most useful and important of the three kinds we have noticed, is an annual plant cultivated in the United States, India, China, and many other countries. It attains the height of 18 or 24 inches. The seed is usually planted in rows in March, April, and May; and the cotton is gathered by hand, within a few days after the opening of the pods, in August, September, and October. It is to this kind that the planters confine their attention in the southern part of North America,—the places where cotton is most extensively cultivated, and where the following varieties are commonly distinguished:—1*st*, *Nankeen Cotton*, abundant in produce, the seed covered with down, the wool of a dirty yellow colour, and usually low priced. 2*d*, *Green-seeded Cotton*, which, as well as the former, is grown in the upland and middle districts, whence the latter is called *upland*, also *short-staple*, and, from the mode in which it was formerly cleaned, *bowed Georgia Cotton.* This kind was at first chiefly raised in Georgia and South Carolina, but of late years it has been very greatly extended in Alabama, Mobile, and the Valley of the Mississippi. 3*d*, *Sea-island* or *Long-staple Cotton*, the finest of all, is distinguished by the black colour of its seed, and the fine yellowish-white, strong, and silky long staple by which it is surrounded; it is grown in the lower parts of Georgia and South Carolina, near the sea, between Charleston and Savannah, and on small islands adjoining the shore. Owing to the peculiar combination of circumstances requisite for the production of this kind, it forms only a trifling proportion (about 12,000,000 lbs.) of the cotton grown in the United States; nor is the quantity on the increase.

All the varieties of the plant require a dry and sandy soil. Marshy ground is wholly unfit for it, and a wet season is destructive to the crops, which are besides precarious from the diseases to which the plant is subject, particularly blight produced by wetness at the roots. In general, it flourishes most luxuriantly, and yields produce of the best quality, on the coast, as is proved by the growth of the sea-island cotton, which is mostly exposed to the action of the ocean's spray; and a manure of salt mud is known to impart a healthful action to the plant, and to produce a staple at once strong and silky. To this rule, however, the fine Pernambuco cotton is an exception; also the Egyptian, the growth of the upper provinces being greatly superior to that of the Delta. In the United States, land fresh brought under cultivation will yield, on an average, from 1000 to 1200 lbs. per acre of cotton with the seed, which will give, of clean cotton, from 250 to 300 lbs.; but in the old states, the produce is not more than one-half of this quantity.

The operation of gathering the ripe cotton requires to be performed with great care; and its separation from the seeds is a work of some difficulty, and one which must be done effectually before the article is packed, otherwise it will become oily and mouldy, and by the particles of seed and dirt be rendered unfit for spinning. In Asia this is slowly performed by a rude hand-mill or roller-gin, by which not more than from 40 to 65 lbs. a-day can be cleansed. The sea-island cotton is still separated from the seeds by rollers, constructed however on a powerful scale; but, excepting this kind, all the North American produce is cleaned by the saw-gin, invented in 1793 by Mr Eli Whitney, of Massachusetts, by which one man may separate 3 cwts. in a day. This invention forms an important era in the history of the cotton-trade, as, though the instrument injures, in some degree, the fibre, the process is so rapid as to have been the main cause of the cheapness of the short-stapled American cottons, and thus has powerfully contributed to the extension of its cultivation.

After the cotton is separated from the seeds, it is packed in large canvass bags, commonly with the aid of a screw or hydraulic press, into a very dense bale, for the convenience of transport. The bale of Virginia, Carolina, Georgia, or West India cotton weighs from about 300 to 310 lbs.; that of New Orleans and Alabama, from about 400 to 500 lbs.; the East India bale, 320 to 380 lbs.; the Brazilian, 160 to 200 lbs.; and the Egyptian, 180 to 300 lbs.

In the infancy of the manufacture, England obtained the raw material from the Mediterranean and Levant. In last century, the largest supplies came from the West Indies and South America; but before 1779, the quantity annually imported scarcely exceeded 5,000,000 lbs. In 1786, when the total imports were 19,900,000 lbs., there were brought from the British West Indies 5,800,000 lbs.; French and Spanish colonies, 5,500,000 lbs.; Dutch colonies, 1,600,000 lbs.; Portuguese colonies, 2,000,000 lbs.; Smyrna and Turkey, 5,000,000 lbs. Prior to the American revolution, it was raised to a limited extent in the southern colonies for domestic use; and after the peace of 1783, small quantities were exported from Georgia. It was not, however, cultivated to much extent for exportation until about 1791 or 1792. Soon after which it became the great staple of South Carolina and Georgia, and lately of the new states in the south-west. In 1791, the quantity exported was only 189,316 lbs.; but in 1794, it was increased to 1,601,760 lbs.; in 1800, to 17,789,803 lbs.; since which, owing to Mr Whitney's invention, and the industry and enterprise of the American planters, the exports have gradually risen to be in value equal to one-half of the whole domestic exports of the United States. [UNITED STATES.] An equally rapid extension has occurred in the consumption of the article in this country, in consequence of the discoveries of Hargreaves, Arkwright, Crompton, Cartwright, and others, as noticed in the next article.

The following statements of the production and distribution of cotton in 1834 are derived from tables compiled by order of the American Congress, and presented to the House of Representatives by Mr Levi Woodbury, late Secretary of the United States Treasury.

Estimated Production in 1834.

	lbs.
United States	460,000,000
Brazil	30,000,000
Mexico and South America (exclusive of Brazil)	35,000,000
West Indies	8,000,000
Egypt	25,000,000
Other parts of Africa	34,000,000
India	185,000,000
Other parts of Asia	110,000,000
Other parts of the World	13,000,000
Total	900,000,000

Distribution in 1834.

	lbs.
Exports from U. States to England	266,750,000
.... to France	79,900,000
.... to other places	20,000,000
Total from United States	366,650,000
Exports from India to England	32,000,000
.... to China	40,000,000
Brazil to England	18,000,000
West Indies to England	4,000,000
Brazil & West Indies to France	4,000,000
Egypt & Turkey to England	1,500,000
.... to France	7,000,000
Total	473,150,000

The differences between the quantities produced in and exported from the several countries represent the probable consumption in the places of growth. Since 1834 the cultivation has been materially increased, particularly in the United States, India, and Egypt, to which heads, as well as those of the other countries of production, we refer for further information.

The following table exhibits the progress of the British trade since 1820; annexed to which is the average annual price of upland or bowed Georgia cotton, which is generally considered as forming a standard by which the value of other kinds is measured.

ACCOUNT of the Quantities of Cotton-wool imported into the United Kingdom, and the Quantities Exported and Entered for Home Consumption; also the average prices of Upland or Bowed Georgia in each year, from 1820 to 1840 inclusive.

Years.	IMPORTS.			Exports.	Entered for Consumption.	Uplands per lb.
	United States.	Other Countries.	Total.			
	lbs.	lbs.	lbs.	lbs.	lbs.	d.
1820	89,999,174	61,673,481	151,672,655	6,024,038	152,829,633	11¼
1821	93,470,745	39,065,875	132,536,620	14,589,497	137,401,549	9⅝
1822	101,031,766	41,805,862	142,837,628	18,269,776	143,428,127	8¼
1823	142,532,112	48,870,391	191,402,503	9,318,402	186,311,070	8½
1824	92,187,662	57,192,460	149,380,122	13,299,505	141,038,743	8¾
1825	139,908,699	88,096,592	228,005,291	18,004,953	202,546,869	12⅝
1826	130,858,203	46,749,198	177,607,401	24,474,920	162,889,012	6⅜
1827	216,924,812	55,524,097	272,448,909	18,134,170	249,804,396	6¼
1828	151,752,289	76,008,353	227,760,642	17,396,776	208,987,744	6¼
1829	157,187,396	65,580,015	222,767,411	30,289,115	204,097,037	5⅝
1830	210,885,358	53,076,094	263,961,452	8,534,976	269,616,640	6¾
1831	219,333,628	69,341,225	288,674,853	22,308,555	273,249,653	6⅛
1832	219,756,753	67,075,772	286,832,525	18,027,940	259,412,463	6⅞
1833	237,506,758	66,150,079	303,656,837	17,363,882	293,682,976	9⅛
1834	269,203,075	57,672,350	326,875,425	24,461,963	302,935,657	8⅜
1835	284,455,812	79,247,151	363,702,963	32,779,734	326,407,692	10⅛
1836	289,615,692	117,343,365	406,959,057	31,739,763	363,684,232	10¼
1837	320,651,716	86,635,067	407,286,783	39,722,031	368,445,035	8
1838	431,437,888	76,412,689	507,850,577	30,644,469	455,036,755	6¾
1839	311,585,800	76,569,426	388,155,226	37,515,303	355,781,960	8
1840	488,572,510	104,392,994	592,965,504	38,673,229	531,197,659	6

Of the 76,412,689 lbs. imported from other countries than the United States in 1838, the latest year for which the particulars are given in the public accounts, there were brought from East Indies 40,217,734 lbs.; Brazil, 24,464,505 lbs.; Egypt, 4,751,923 lbs.; Colombia, 2,877,194 lbs.; British West Indies, 1,529,536 lbs.; Italy, &c., 996,764 lbs.; Turkey, 660,555 lbs.; Chili, 424,633 lbs.; Peru, 131,680 lbs.; other places, 358,165 lbs. The re-exportations are almost exclusively to Germany, Holland, Belgium, Russia, and Italy.

The supply of cotton derived from India has increased considerably within the last ten years, owing to the great attention which is now paid to its cultivation by the Company. The average importation of the three years 1827, 1828, and 1829, was only 26,043,467 lbs., whereas that of the three years, 1837, 1838, and 1839, was 46,001,308 lbs.; being an augmentation of fully 75 per cent. On the other hand, the importations from the British West Indies have fallen off within the same period from about 5,000,000 lbs. to only 1,500,000; the cultivation of cotton having been for the most part abandoned by the planters, owing to the cheaper rate at which it can now be prosecuted in India and the United States.

"A few words must be said as to the distinguishing qualities of cotton-wool in the estimation of the manufacturer. The quality depends on the length, strength, and fineness of the fibre, or, as it is called in the trade, the staple; but these, which are the essential attributes of quality, are modified by the cleanliness and the colour. The different denominations of cotton-wool vary considerably from each other in these particulars, and the value is estimated accordingly. In cotton of the same denomination there is also a considerable difference in quality. In Sea-island cotton, which as a class is by much the most valuable, this difference is great; the very finest quality of this class, in ordinary states of the market, is worth three times as much as the common quality of the same class. The variation of quality in most of the other denominations is from 20 to 25 per cent., and in none of them is more than 50 per cent. Formerly, the usual distinction of the different sorts of cotton had reference to the colour, "yellow" and "white." But now, improved modes and processes of manufacturing have rendered colour of less importance than staple, and the broad distinction is therefore into "long-stapled" and "short-stapled." The principal long-stapled cottons are Sea-islands, Brazils of every kind, Demerara, West Indian, and Egyptian. The short-stapled cottons include such parts of the produce of North America as are grown in the interior of that country, and called Uplands, Orleans, Alabama, Mobile, &c., as well as the East India cotton, Surat, Bengal, and Madras. Except the better qualities of Sea-islands, there is no sort of cotton which is now confined in its use to any peculiar or exclusive purpose. By mixing different sorts together, and by careful management in preparing the mixture for the spinning, the manufacturers can now make a substitute for almost any particular kind of cotton, except the very best. It is only requisite to add, that the long-stapled cottons are generally used for the twist or warp, and the short-stapled for the weft." (*Baines' History of the Cotton Manufacture.*)

The relative value of the different kinds introduced into this country will be seen in the following list, extracted from the Liverpool Price-current of 11th March 1841:—

	d.		d.		d.		d.
Sea-island	14	to	30	Demerara	8	to	12
.... stained	6	—	12	West India	6	—	8½
Bowed Georgia	6	—	7⅝	Peruvian	8	—	..
Mobile	6	—	7¾	La Guayra	7	—	7⅝
Tennessee	5½	—	..	Carthagena	4⅞	—	5¼
New Orleans	6	—	8½	Smyrna	6¼	—	..
Pernambuco	8⅞	—	9½	Egyptian	9½	—	13
Bahia	8	—	9	Surat	4⅜	—	6¼
Maranham	7¾	—	8½	Madras	..	—	..
.... saw-ginned	7	—	7½	Bengal	4½	—	..

The expense of bringing cotton to this country from New Orleans and Mobile is about ¾d. per lb., and from the Atlantic States, ½d. to ⅝d. per lb. The American planters frequently consign it for sale on their own account, but the greater part is sent by mercantile houses. About nine-tenths of the whole imports to this country are brought to Liverpool, where it is sold by brokers, who charge 10s. per £100 for their trouble. The same commission is demanded by the brokers employed to purchase for the spinners or dealers. The sales are made by sample, and owing to the strict probity of the brokers, they are conducted with unparalleled facility and despatch; and though not made with the formalities necessary to render the bargains legally binding, yet a difficulty in their fulfilment is almost unknown. Any misunderstandings which do occur are promptly and satisfactorily settled, by a reference to some neutral broker. The credit allowed is 10 days, at the end of which time the usage is to give a banker's bill payable in two months.

Statement showing the Number of Bags and Bales of Cotton Imported, Exported, taken for Consumption, and the Stock on hand in London, Liverpool, and Glasgow, each Year, from 1830 to 1841, both inclusive.*

Years.	Imported.	Exported and destroyed by Fires, &c.	Taken for Consumption.	Stock on 1st January in each Year.			
				In London.	In Liverpool.	In Glasgow.	Total.
	Bags.	Bags.	Bags.	Bags.	Bags.	Bags.	Bags.
1830	870,750	35,800	805,250	77,070	203,250	8,962	289,382
1831	901,764	80,699	862,205	42,852	258,100	21,268	322,220
1832	902,240	65,100	858,434	37,381	212,350	26,575	276,306
1833	931,796	79,066	877,589	34,102	197,960	13,058	245,120
1834	946,585	90,895	863,280	35,243	180,780	9,127	215,150
1835	1,089,309	107,240	937,616	26,296	145,311	13,953	185,560
1836	1,191,744	100,853	1,031,904	24,470	184,700	20,843	230,013
1837	1,163,839	128,535	1,064,931	60,820	204,580	23,500	289,000
1838	1,429,062	102,370	1,265,116	64,150	170,853	24,370	259,373
1839	1,109,550	121,659	1,043,511	46,450	248,349	26,300	321,099
1840	1,599,343	126,045	1,274,729	31,640	206,049	27,790	265,479
1841	....	....	....	50,660	366,140	47,248	464,048

The import duty on cotton wool (exclusive of the late addition of 5 per cent.) is 2s. 11d. per cwt.; but if the produce of, and imported from, any British possession, only 4d. per cwt. This duty, in the year 1840, amounted to £650,000.

COTTON MANUFACTURE. The birthplace of this branch of industry is India, where it probably flourished long before the date of authentic history. In China, throughout which the manufacture is also very generally diffused, it is not supposed to have existed before the beginning of the sixth century of the Christian era. In the tenth century, the cotton plant is stated by Mr Baines to have been extensively cultivated, and its produce woven into cloth by the Mohammedan possessors of Spain, where, and especially at Barcelona, the manufacture long flourished. At a later period (probably about the close of the 15th century), it was introduced into Italy, then the channel through which the fabrics of India were distributed to the rest of Europe. The wool consumed by the Italian manufactures is supposed to have been obtained from the southern shores of the Mediterranean, in most of the countries bordering on which, cotton is known to have been cultivated and converted into clothing in the beginning of the 16th century, and probably before. From Italy the manufacture found its way into the Netherlands, from whence it is supposed to have been brought to England by protestant refugees after the capture and ruin of Antwerp by the Duke of Parma in 1585.

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* In "Burn's Commercial Glance," from which the preceding table is extracted, the average weight of the bags or bales of cotton is given as follows:—American, 373 lbs.; Brazil, 171 lbs.; Egyptian, 284 lbs.; East India, 363 lbs.; West India, 316 lbs.; and of the whole consumed in this country, 346 lbs.

It is unnecessary, and would indeed be difficult, to trace the introduction and history of the manufacture into the other parts of Europe where it is now established; but its growth has, in every case, been subsequent and greatly inferior in extent to its progress in England, though even here it was long unimportant. In 1641, Roberts mentions, in his "Treasure of Traffic," that at Manchester "they buy cotton wool in London that comes first from Cyprus and Smyrna, and at home work the same and perfect it into fustians, vermillions, dimities, and other such stuffs, and then return it to London, where the same is vented and sold, and not seldom sent into foreign parts, who have means, at far easier terms, to provide themselves of the said first materials." But the cotton manufacture made very slow progress in this island for more than a hundred years after the time when Roberts wrote. At the commencement of the last century, the importation of cotton-wool into the kingdom scarcely exceeded 2,000,000 lbs. annually, and of this quantity a large portion was used for candlewicks, a purpose to which it had been long applied in this country. Even down to 1760 the manufacture, if it deserved that name, was mostly carried on by weavers scattered over the country in cottages, who purchased what wool they wanted, each on his own account, got it spun into thread by their wives and children, and plied their looms only during part of the day, the rest of which was spent in digging their gardens.

From the year 1760 we may date those improvements which have given to England the appellation of "the second birthplace of the cotton manufacture." The system was then begun by the Manchester merchants of distributing supplies of wool among the weavers by means of agents, who travelled over the country for that purpose at stated times. About that time also the *fly-shuttle* (invented by John Ray of Bury in 1738) was generally introduced into the cotton manufacture; while his son Robert in the same year invented the *drop-box*. These inventions placed the operation of weaving in advance of that of spinning,—a process which until now had been performed by the distaff, or one-thread wheel, and the supply of yarn became more and more inadequate every day. At length in 1767, James Hargreaves, an illiterate but ingenious mechanic, invented the *spinning-jenny*, a contrivance which was speedily followed by the greatly more important one of *spinning by rollers* by the *water-frame*, or *throstle*, for which a patent was taken out in 1769 by Richard (afterwards Sir Richard) Arkwright,* a hairdresser, and which, from that time, communicated altogether a new character to the manufacture.

Hitherto no goods entirely composed of cotton had been made in England. In what were called cotton cloths, it was only the weft or transverse thread that was of cotton; the warp, or longitudinal thread was always of linen yarn,—it not having been found possible to spin the cotton into thread sufficiently strong and hard for the latter purpose. But the yarn spun by Arkwright's machinery being strong enough to serve for warp as well as woof, cloth was now woven entirely of cotton. This important innovation was introduced in 1773, and the greater cheapness of production encouraged the consumption of the article both at home and abroad. In 1785, after a tedious lawsuit, Arkwright's patent was annulled, and the invention of the water-frame being thus thrown open, a great increase in the number of factories took place. After this event, also, the *mule-jenny*, a combination of Hargreaves' spinning-jenny and Arkwright's water-frame, which had been some years before (1779) invented by Samuel Crompton of Bolton, came into general use: it is only by the mule that cotton-thread of the finest qualities can be spun.

The first steam-engine for a cotton-mill was made by Mr Watt in the year 1785.

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* Mr Baines has satisfactorily established that the merit of this discovery, though claimed by Arkwright, truly belongs to John Wyatt of Birmingham, who made it the subject of a patent so early as 1738; but wanting the means to realize his success, the invention slumbered till it was either re-discovered, or what is more probable, till its principles came accidentally to the knowledge of Arkwright, who appreciated its value, and whose perseverance, talent, and good fortune enabled him by its means to enrich himself and his country. The invention was also claimed by Thomas Highs of Leigh.

But at this time the application of the improved machinery was confined to the production of yarn; and as formerly the difficulty had been to find thread enough to feed the looms, so now it seems to have been apprehended that it would be impossible to find a sufficient number of weavers to work the thread that was spun. This great desideratum was, however, supplied by Dr Cartwright, who invented the *power-loom*. This invention took place as early as 1785, but no practical application of it was made until 1801; nor was it until several years afterwards that the difficulties attendant upon its first employment were overcome. These inventions were followed by that of the *dressing-machine*, of the *cylinder printing-machine*, and of *mechanical engraving*, and by the discovery of the various and beautiful processes of *calico-printing*, and of important improvements in the art of *bleaching*. More recently the process of spinning has been further facilitated by the *self-acting-mule* of Mr Roberts. The combined effect of these splendid inventions and discoveries has been, as is well known, the progression of the manufacture with gigantic strides, until it now composes nearly the one-half of our external trade, and affords subsistence to a portion of our population exceeding in amount that of several of the continental kingdoms.

The different processes through which the cotton passes, in its conversion into cloth, all of which are performed in many of the large spinning and weaving mills, are briefly described by Mr Baines as follows:—

> "The cotton is brought to the mill in bags, just as it is received from America, Egypt, or India, and is then stowed in warehouses, being arranged according to the countries from which it may have come. It is passed through the *willow*, the *scutching-machine*, and the *spreading-machine*, in order to be opened, cleaned, and evenly spread. By the *carding-engine*, the fibres are combed out, and laid parallel to each other, and the fleece is compressed into a sliver. The sliver is repeatedly drawn and doubled in the *drawing-frame*, more perfectly to straighten the fibres, and to equalise the grist. The *roving-frame*, by rollers and spindles, produces a coarse and loose thread; which the *mule* or *throstle* spins into yarn. To make the warp, the twist is transferred from cops to bobbins by the *winding-machine*, and from the bobbins, at the *warping-mill*, to a cylindrical beam. This beam being taken to the *dressing-machine*, the warp is sized, dressed, and wound upon the weaving-beam. The latter is then placed in the *power-loom*, by which machine, the shuttle being provided with cops of weft, the cloth is woven.
>
> "Such, without entering too much into minutiæ, are the processes by which the vegetable wool is converted into a woven fabric of great beauty and delicacy; and it will be perceived that the operations are numerous, and every one of them is performed by machinery, without the help of human hands, except merely in transferring the material from one machine to another. It is by iron fingers, teeth, and wheels, moving with exhaustless energy and devouring speed, that the cotton is opened, cleaned, spread, carded, drawn, roved, spun, wound, warped, dressed, and woven. The various machines are proportioned to each other in regard to their capability of work, and they are so placed in the mill, as to allow the material to be carried from stage to stage with the least possible loss of time. All are moving at once,—the operations chasing each other; and all derive their motion from the mighty engine, which, firmly seated in the lower part of the building, and constantly fed with water and fuel, toils through the day with the strength perhaps of a hundred horses. Men, in the meanwhile, have merely to attend on this wonderful series of mechanism, to supply it with work, to oil its joints, and to check its slight and infrequent irregularities; each workman performing, or rather superintending, as much work as could have been done by two or three hundred men sixty years ago. At the approach of darkness, the building is illuminated by jets of flame, whose brilliance mimics the light of day, the produce of an invisible vapour, generated on the spot. When it is remembered that all these inventions have been made within the last seventy years, it must be acknowledged that the cotton-mill presents the most striking example of the dominion obtained by human science over the powers of nature, of which modern times can boast."—(*History of the Cotton Manufacture*, p. 242.)

The principal and original seat of the British cotton manufacture is Manchester, including the district lying within from thirty to fifty miles around it, which is more important for the quantity, variety, and excellence of its productions than all the others together. The departments of spinning, manufacturing, bleaching, and printing, are all here carried to the highest perfection. The Manchester mills supply the finest yarns; and almost every description of cotton goods, except lace and hosiery, is made in Lancashire. Besides Manchester, four other great districts are distinguished by their cotton manufactures, namely, 1*st*, Glasgow, and the country around it, extending to Perth and Aberdeen; 2*d*, Nottingham, including Derby, Warwick, and Lichfield; 3*d*, Carlisle, branching out so as nearly to meet the Manchester and Scottish divisions; 4*th*, The counties of Antrim, Armagh, Dublin, and Kildare, in Ireland. The Glasgow district is chiefly celebrated for muslins and bandanas; the Nottingham, for lace and cotton hosiery. [LACE. HOSIERY.] Calico printing is carried on chiefly in the neighbourhood of Manchester, in the valleys between Blackburn, Clitheroe, and Bury, and in the vicinity of Glasgow, Dublin, and London. The principal bleaching works are in the neighbourhood of Bolton, Blackburn, Manchester, and Glasgow.

The following tables exhibit the course and progress of our export trade in cottons, and the quantities of the different descriptions of these goods which composed the shipments at different periods.

Account of the Declared Value of Cotton Manufactures, and of Cotton Twist and Yarn, exported to different Countries in the Years 1820, 1830, and 1838.

	1820.		1830.		1838.	
	Manufactures.	Twist and Yarn.	Manufactures.	Twist & Yarn.	Manufactures.	Twist & Yarn.
	£	£	£	£	£	£
Russia	702,125	1,094,305	155,975	1,067,662	64,755	1,236,584
Prussia	205,554	7,468	52	3,370	28	1,272
Germany	2,763,989	1,404,519	1,478,570	1,449,521	1,065,047	2,264,330
Holland	979,681	55,261	646,689	612,925	634,041	1,864,522
Belgium					194,855	11,740
France	1,821	....	10,001	391	172,026	48,271
Portugal, Azores, & Madeira	792,825	13,401	630,111	14,276	744,912	27,636
Spain, the Balearic Islands, and Canaries	140,010	1,169	220,086	726	34,452	185
Gibraltar	837,836	11,104	145,404	1,044	600,908	7,673
Italy and Italian Islands	1,336,831	138,919	1,758,925	433,754	1,379,082	626,503
Malta	175,593	10,784	74,339	19,296	99,574	21,048
Turkey	352,894	61,258	861,759	86,148	1,321,069	285,314
Egypt			71,594	8,946	189,090	14,904
Barbary States			....	....	59,930	....
West Coast of Africa	28,592	8	96,271	54	187,377	326
Cape of Good Hope	68,673	....	122,245	1,296	206,024	584
Mauritius	....	....	67,945	7	169,986	....
East Indies and Ceylon	....	....	1,562,574	333,286	1,805,449	640,205
China	850,882	24			522,857	217,047
Java, Sumatra, Siam, &c.	....	....	114,409	2,040	377,020	27,952
Australasia	12,749	78	45,767	848	194,487	749
British America	176,884	1,322	375,597	8,803	402,972	14,824
——— West Indies	1,072,067	548	645,768	698	989,674	3,609
Foreign West Indies	451,782	170	541,804	....	679,643	426
United States	1,194,305	226	2,305,165	3,598	1,470,918	5,349
Mexico	454,210	649	660,546	32,026	267,434	15,707
Central America			146,643	80	....	....
Colombia					94,960	90
Brazil	964,080	....	1,416,167	650	1,657,702	1,450
States of La Plata	....	....	344,310	587	486,923	1,470
Chili	....	....	372,610	....	272,022	391
Peru	....	....	233,650	....	221,679	1,600
Channel Islands	74,253	180	81,128	2,128	63,511	155
Other places	52,503	25,245	108,819	29,581	85,450	89,946
Total	13,690,109	2,826,639	15,294,923	4,133,741	16,715,857	7,431,869

Statement of the Quantity and Declared Value of British Cotton Manufactured Goods Exported from the United Kingdom, distinguishing the descriptions of Goods in various Years since 1820.

		1820.	1825.	1830.	1835.	1838.
White or plain cottons	yards	113,682,486	158,039,786	244,799,032	277,704,525	363,357,845
	value £	5,451,024	6,027,892	6,562,397	6,910,506	7,293,831
Printed or dyed cottons	yards	134,688,144	178,426,912	199,799,466	279,811,176	326,719,777
	value £	7,742,505	8,205,117	7,557,373	8,270,925	8,260,902
Hosiery and small wares,	value £	496,580	919,787	1,175,153	1,240,284	1,161,124
Twist and yarn	pounds	23,032,325	32,641,604	64,645,342	83,214,198	114,596,602
	value £	2,826,639	3,206,729	4,133,741	5,706,589	7,431,869
Total declared value £		16,516,748	18,359,526	19,428,664	22,128,304	24,147,726

If the first and last years in this table are compared, it will be seen, that while the number of yards exported in 1838 is greater by 178 per cent. than the number exported in 1820, the increase in the declared value has been scarcely 18 per cent.; the average price a-yard, which in 1820 was 12$\frac{1}{12}$d., having fallen in 1838 to 5$\frac{5}{12}$d. The quantity of twist exported has increased in the same period 398 per cent., while the increase in the declared value is not more than 163 per cent. The average price of twist, in 1820, was 2s. 5$\frac{5}{12}$d., and in 1838, only 1s. 3$\frac{7}{12}$d. a-pound. We may thus form some judgment as to the economy which has been introduced into the process of manufacture between 1820 and 1838, and are, besides, able to apportion that which appertains to the spinning and to the weaving branches respectively,—holding, what may reasonably be supposed, that the average qualities of cloths and twist should have been the same at both periods. The diminution of value in the twist amounts to 47⅓ per cent., and in the cloth to 55¼ per cent.: hence, by far the greater part of the saving occurs in the spinning processes,—a circumstance which may in part account for the greater proportionate increase in the exportation of twist and yarn.

In Mr Baines' work, an account is given of the extent and value of the British cotton manufacture in 1833, of which the following is an abstract:—

Cotton-wool imported, 303,656,837 lbs.; consumed in the manufacture, 282,675,200 lbs. Yarn spun (deducting 1¼ oz. per lb. for loss), 256,174,400 lbs.; number of hanks spun (averaging 40 to the lb.), 10,246,976,000; length of yarn spun (840 yards to the hank), 4,890,602,182 miles.*

Value of the cotton-wool consumed, at 7d. per lb. £8,244,693; value of manufactures consumed at home, £12,879,693; and of exports, £18,459,000; making total annual value of the manufacture, £31,338,693. Capital employed in the manufacture, £34,000,000.

Number of persons supported by the manufacture, 1,500,000. Operatives in the spinning and weaving factories in England, 200,000; in Scotland, 32,000; in Ireland, 5000; total, 237,000. Hand-loom weavers, 250,000. Wages earned by the factory operatives, £6,044,000; by the hand-loom weavers, £4,375,000.

Power, moved by the factories, 33,000 horses; water, 11,000 do; total, 44,000 horse-power. Number of spindles, 9,333,000; number of power-looms, 100,000.

In 1840, the quantity of cotton-wool entered for home consumption was 531,197,659 lbs., being an increase of 81 per cent. beyond the amount in 1833, when the foregoing estimates were formed; and the value of the exports had increased to £24,661,179 (of which £7,099,468 was composed of yarn and twist), being an augmentation of 33¾ per cent. since 1833. At the present time, therefore, we may fairly estimate the annual value of the manufacture as being at least £40,000,000, and the capital invested in it at nearly the same. This last estimate of the capital is much less than what the above proportions would indicate, having been made on the assumption that, though a considerable increase must have taken place on the fixed capital on buildings, and machinery, since 1833, it is probable no great addition has been made on the floating capital, as, owing to quicker returns, the same amount now suffices for the transaction of a larger amount of business.

The foreign countries in which the cotton manufacture is chiefly prosecuted will be seen from the account given in last article of the production and distribution of the raw material. It exists on a considerable scale in the New England states of America, and in France, in each of which the produce of the manufacture may be estimated at nearly one-fourth that of Great Britain. It is also advancing in Saxony, Prussia, Switzerland, and Lombardy. The Americans, from their proximity to the cotton-growing districts, possess an advantage in those articles where the value of raw material exceeds that of the workmanship; and in Germany and France perhaps a superiority exists in some descriptions of hosiery and yarns; but in a general point of view, England commands a superiority over all the nations of the world in regard to the cotton manufacture; and in other countries this branch of industry is only maintained under a system of protection.

In no way is the superiority of the British manufacture more strikingly shown than in the extent of the triumph it has gained over the cotton fabrics of India, formerly reckoned so beautiful and cheap, that nearly all the governments of Europe thought it necessary to prohibit them, or to load them with heavy duties, in order to protect their own manufactures. Now, however, the British manufacturer brings the cotton of India from a distance of 12,000 miles, commits it to his spinning-jennies and power-looms, carries back their products to the East, making them again to travel 12,000 miles; and, in spite of the loss of time, and of the enormous expense incurred by this voyage of 24,000 miles, the cotton manufactured by his machinery becomes less costly than the cotton of India spun and woven by the hand near the field that produced it, and sold at the nearest market.

A duty of 10 per cent. is imposed on foreign cottons, and of 20 per cent. on made-up articles. Partly from this cause, but mainly from the superiority of the British manufacture, the importations are comparatively trifling, chiefly consisting of Indian piece goods, with hosiery, yarn, and other articles from Germany and France.

COUPONS (Fr.), warrants for payment of the periodical dividends on public stocks, a number of which, being appended to the bonds, are severally cut off for presentation as the dividends fall due. The practice of appending coupons to bonds prevails chiefly in reference to foreign stocks.

COVADO, a Portuguese cloth measure equal 26¾ Imperial inches.

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* In cotton yarn measure, a thread = 54 inches; a skein or rap of 80 threads = 120 yards; a hank of 7 skeins = 840 yards; a spindle of 18 hanks = 15,120 yards.

COVID, an Oriental cloth measure. In China it is equal to 14⅝ Imperial inches; in Bombay, to 18; in Madras, to 18¾; and in Malacca, to 18⅛.

COWITCH, OR COWHAGE, an article of the *materia medica*, consists of the hairs growing upon the pods of different species of *Mucuna*, a large twining plant found in India and other tropical countries, in hedges, thickets, and about watercourses. They are slender, brittle, easily detached, and readily stick into the skin, and produce an intolerable itching. Cowitch is used as a vermifuge, by being mixed with syrup till of the consistence of honey. Before the pods are ripe, and their hairs hardened, they are employed as a vegetable like kidney-beans, and are said to be delicious.

COWRIES (Por. *Bucios simbos*), small, white, glossy shells (*Cyprea moneta*), found in abundance on the shores of the Maldive and Laccadive islands. They are used in India and in some parts of Africa as a minor currency. In Calcutta they are employed in *Kauchau* accounts, the method used in small bazaars by the natives, reckoning 4 cowries = 1 gunda; 20 gundas = 1 pun; 4 puns = 1 anna; and 4 annas = 1 cahun. The value of the cahun fluctuates according to the abundance or scarcity of cowries, but it is commonly equal to about a quarter of a rupee; at this rate, 5120 cowries = 1 rupee.

CRAB, a crustaceous animal (*Cancer pagurus*, Linn.) common on the rocky shores of Britain and Western Europe. Crabs are brought to market both in a boiled and in a raw state. If the distance be great, they are placed in a well-box, which is attached to the outside of the fishing vessel; and in this manner they are conveyed to London even from Norway and other remote parts. The animal is so tenacious of life, that it does not lose its vital powers until two or three days after leaving the sea. May, June, and July are the months in which it is generally out of season. The male is of greater value than the female, and has larger claws. Before boiling, a good crab is known by the roughness of its shell, particularly on the claws. When boiled, its quality is known by holding the claws tight, and shaking the body, which will rattle or seem as if water were in the inside, if it be not in perfection.

CRAB, a tree, the common kind of which (*Pyrus malus*) is found native in many parts of the United Kingdom, particularly on the eastern slopes of the Welsh mountains. Its timber is compact, and answers well for turning, and for the working parts of machinery. On a rich soil, the tree yields a small kind of apple, the sour juice of which, previous to the introduction of the modern methods of obtaining vegetable acids, was in request under the name of *verjuice*. Such apples are now only used for feeding hogs.

CRANAGE, a common port-charge for the use of a crane by which goods are lifted out of a ship.

CRANBERRY, the fruit of a slender trailing kind of shrub, of which there are two species. The English or Russian cranberry (*Oxycoccus palustris*), common in the bogs of Norfolk, Lincoln, Scotland, and other parts, is a round, austere, red berry, about the size of a common currant: the American cranberry (*O. macrocarpus*) resembles the other, but is larger, has a more medicinal taste, and is considered of inferior quality; it is imported in considerable quantity from the United States. Cranberries are much used by the pastry-cook for making tarts and some kinds of marmalade.

CRAPE (Fr. *Crêpe*. Ger. *Flohr*. It. *Espumilla*. Por. *Sendal*. Sp. *Crespon*), a light and transparent silken fabric, made with hard silk of the natural colour,—the warp being usually composed of singles, the shoot frequently of the same material, but sometimes when a closer texture is required, of two-thread tram. The peculiar appearance of this article is given to it in the operations of dyeing and dressing after it is woven; and "different manufacturers affect a degree of mystery with regard to their peculiar modes of dressing crape, possessing or imagining thence some superiority over their rivals in the manufacture" (*Lardner's Silk Manufacture*). Crape is generally dyed black, and, from its sombre appearance, has always been considered as adapted to mourning vestments. The manufacture is established in various parts of Norfolk, Suffolk, Essex, Somerset, and at Panders-End in Middlesex, but it has of late years decreased. [SILK MANUFACTURE.]

CRAW-FISH, a long-tailed crustaceous animal (*Astacus fluviatilis*) of the lobster kind, found in the fresh waters of Europe and the north of Asia. It thrives best in rivers, and is commonly taken by nets or bundles of thorns in which flesh in a state of decomposition is placed.

CRAYONS, a material for drawing, are of two kinds,—native and artificial. The former is generally of a black, white, or red colour. The best black is a species of earth brought from Italy, of a bright even tint, and of a smooth and moderately hard texture. The best white is a kind of chalk, and is procured in France; it is of a brilliant colour, but very brittle. Pipe-clay is sometimes employed as a substitute, though of an inferior tint. Red crayon is a clayey ochreous kind of chalk. The artificial crayons are composed of earths of different colours, and other pigments, rolled into sticks with some tenacious substance, such as milk or beer-wort.

CREAM OF TARTAR. [TARTAR.]

CREASOTE. [KREASOTE.]

CREDIT may be defined to be that confidence which subsists among commercial men in regard to their mercantile affairs. This confidence operates in various ways. It disposes them to lend money to each other; to bring themselves under various pecuniary engagements by the acceptance and indorsement of bills; and also to sell and deliver goods in consideration of an equivalent promised to be given at a subsequent period. In a society in which law and the sense of moral duty are weak, and property is consequently insecure, there will of course be little confidence or credit, and there will also be little commerce.

"The day," says Mr Thornton, "on which it suits the British merchant to purchase and send away a large quantity of goods, may not be that on which he finds it convenient to pay for them. If it is made necessary for him to give ready money in return, he must always have in his hands a very large stock of money; and for the expense of keeping this fund (an expense consisting chiefly in the loss of interest) he must be repaid in the price of the commodities in which he deals. He avoids this charge, and also obtains time for preparing and adjusting his pecuniary concerns, by buying on credit; that is to say, by paying for his goods not by money, but by the delivery of a note, in which he promises the money on a future day. He is thus set more at liberty in his speculations; his judgment as to the propriety of buying or not buying, or of selling or not selling, and also as to the time of doing either, may be more freely exercised.

"But the custom of taking and of giving long credit has its inconveniences as well as its advantages. It increases the amount of the bad debts incurred in the course of commercial transactions. The apprehension of loss is therefore continually operating on the mind of the lender as a restraint on the custom of giving credit, while the compensation he receives for the use of the capital which he supplies acts as an encouragement to the practice. The subsisting state of credit may in general be considered as resulting out of a comparison made both by lenders and borrowers, of the advantages and disadvantages which each discover that they derive from giving and taking credit. Mercantile confidence, however, is not always dealt out in that proportion in which there is reasonable ground for it. At some periods it has risen to a most unwarrantable height, and has given occasion to the most extravagant and hurtful speculations.—Evils of this kind, however, have a tendency to correct themselves. In a country possessed of commercial knowledge and experience, confidence, in most instances, will not be misplaced.

"Some persons are of opinion, that when the custom of buying on credit is pushed very far, and a great quantity of individual dealings is in consequence carried on by persons having comparatively little property, the national commerce is to be considered as unsupported by a proper capital; and that a nation, under such circumstances, whatever may be its ostensible riches, exhibits the delusive appearance of wealth. It must however be remembered, that the practice of buying on credit, in the internal commerce of the country, supposes the habit of selling on credit also to subsist, and to prevail, on the whole, in an exactly equal degree. In respect to the foreign trade of a country, the practice of dealing on credit indicates poverty or riches, in proportion as the credit generally taken is longer or shorter than the credit given." (*Essay on Paper Credit*, p. 15-19.)

Credit, though of itself it can add nothing to capital, yet is thus often the invigorating influence that aids the processes by which it is fed. Capital might sometimes be frost-bound and stagnant, did not credit, as it were, lend the heat to thaw it, and set it flowing. Supposing all credit to be prohibited, every capitalist who may be incapable of employing his money successfully, will either not invest it, or if he does, he will lose it; while those who have no capital, but are possessed of skill and capacity for its profitable management, are deprived of all opportunity of exercising the talent and activity with which they are endowed,—at least in the manner in which they might be most efficiently exercised. In both ways are inflicted private injury as well as public loss. But under a law permitting and protecting credit, the capital in the community is brought into combination with the skill of the community, and the result is the most productive application of both.

These observations, however, must be understood as having reference to that system of credit which is conducted upon fixed principles, and which prevails generally among persons in business, and not to that irregular description of it which frequently takes place betwixt the retailer and the consumer. The latter is a great social evil. It is opposed to habits of frugality and prudence, and in some branches of business has led to such flagrant abuses as in the opinion of many to justify the interference of the legislature. In a well-written pamphlet by Mr A. Rosser, solicitor, titled, "Credit Pernicious," and which produced a considerable sensation, the proposition was brought forward, "That in a great variety of cases, simple contract debts between 40s. and £100 shall not be recoverable by any suit or process whatsoever." Mr Rosser's proposed regulations, however, are deficient in clearness; and the exception which he would make of debts below 40s. would of itself open boundless facilities for escaping from the general rule. A much better plan has been advanced by Mr M'Culloch (*Dictionary*, art. Credit), namely, to take away all actions for debts under a given sum, as £50, or £100, with the single exception of claims for wages, or for labour done under executory contracts. This would be at least a simple and precise regulation, and one which would rarely admit of being evaded. But notwithstanding the eminent authority on which this innovation is recommended, we doubt its expediency. Admitting to the full extent the evils that have been alleged to attach to the existing system of unrestricted credit, and the right of society to refuse its recognition of any compacts between individuals, which shall be deemed to be in their general nature injurious,—we apprehend public opinion would scarcely tolerate some of the results, outraging all sense of natural justice, which the working of the proposed law would produce. Further, we apprehend, that instead of generally putting down the present practice of buying and selling on credit, such a law would only aggravate its worst evils. In principle it would be very nearly the same with that of the usury laws, which, in certain cases, refuses to recognise loans of money where the rate of interest is higher than five per cent. The effect would be, that the premium paid by the customer for the accommodation which he sought would be raised. Improvident persons would not be kept out of tradesmen's books; they would only be more severely fleeced.

The only proper remedy for the evils of the credit system, we believe, is to be afforded not by altogether depriving the creditor of his right to recover his debt, but by restricting the exercise of that right to its legitimate object. On the principle alone that the law should do as much as it can to uphold the dignity of human nature, we would abolish altogether imprisonment for debt, and keep that infliction exclusively for its proper use—the punishment of crime. We would consider the creditor as having no claim against the debtor himself, but only against his property. Upon the same views, we would protect likewise so much of the debtor's property as should be evidently necessary to enable him to obtain a subsistence for himself and his family. The workman's tools should certainly be exempt from seizure, and also the more indispensable articles of his household furniture. By such changes, we would mitigate whatever is unnecessarily harsh in the provisions of the law; but we should look to other influences rather than to any that legislation could exert, for the correction of mere habits of improvidence, and the protection of individuals from the inconveniences naturally consequent upon their own voluntary acts.

These views have, to a certain extent, been lately carried into practical operation,—in England by the act 1 & 2 Vict. c. 110, of which an account is given under the head INSOLVENCY, and in Scotland by the 5 & 6 Wm. IV. c. 70, § 1, which provides that no person shall be imprisoned for a debt not exceeding £8, 6s. 8d., exclusive of interest and expenses. From the prevailing state of public opinion, little doubt can be entertained that these laws will erelong be followed by others of a more comprehensive character. [ACCOMMODATION. BANK. FUNDS. MONEY.]

CRETE. [CANDIA.]

CREW. [MASTER. SEAMAN.]

CROCUS. [COLCOTHAR.]

CRORE, in Hindoo numeration, signifies ten millions. It is used to express 100 lacs of rupees; and as each lac is 100,000 rupees, or nearly £10,000, the crore is about £1,000,000 sterling.

CROTON, a plant used in medicine, and of which there are two kinds: 1*st*, The *Croton tiglium*, a native of India, the seeds of which are about the size of a small marble, of a convex shape on one side, and bluntly angular on the other, and enveloped in a thin shell. These seeds are the most powerful purgative known.

"Five hundred doses may be contained in a small wafer box." In this country the medicine is used in the form of an oil expressed from the seeds. 2*d*, The *Croton cascarilla*, the bark of which finds a place in *materia medica:* it is imported from the Bahamas, either in curled pieces, or rolled up into short quills; is brownish, resinous, and shining, with a weak aromatic smell, and a bitter taste.

CROWN, a silver coin in Great Britain and other countries. On the Continent it is known under the various names of couronne, ecu, patagon, and scudo.

CRUSADO, the name given to two Portuguese coins: the old crusado, or crusado of exchange of 400 reis, and the new crusado of 480 reis. [PORTUGAL.]

CUBA, a noble West India island and Spanish colony, situated at the entrance into the Gulf of Mexico, between long. 74° 11′ and 84° 58′ W., and lat. 19° 47′ and 23° 9′ N. Area about 43,000 square miles, being nearly equal to all the other islands together. Population about 900,000, of whom, from one-third to one-half are whites, nearly one-third slaves, and the remainder free people of colour. By the former Spanish constitution, Cuba and Porto Rico, being integral parts of the monarchy, were governed like the provinces of Old Spain: they are now under the charge of a captain-general, who resides at Havana, the capital.

A chain of hills runs through the centre of the island from E. to W., from which the land gradually inclines on both sides towards the coast. The country is broken into hill and valley, and plains. The sides of the hills are in some situations cultivated, and are generally fertile; but the soil is liable to be washed off by heavy rains. The valleys and plains compose nearly four-fifths of the island, and are extremely productive, being in this respect unequalled in the West Indies, except, perhaps, by some parts of Hayti and Guiana; only a very small extent, however, is under cultivation. There are very few rivers, and none large; and a great portion of the island is subject to severe droughts. This disadvantage is remedied in some places by diverting the course of the streams for the purpose of irrigation. The climate, although tropical, indicates a transition to that of the temperate zone. The mean temperature of the interior is 73°, and of Havana 77°. The mean annual heat of Havana, in July, the hottest month, is 84°; the mean of the coldest is 70°, and the depression of the thermometer to 55° is rare. The N. winds are sometimes violent; but hurricanes occur less frequently than in the other Antilles. The chief mineral product is copper, the mines of which, near Santiago, have of late years attracted considerable attention; several are worked by English and American companies, and a considerable quantity of ore is sent to Swansea, in Wales, to be smelted. [COPPER.] The leading objects of culture are sugar, coffee, and tobacco, which form the great staples of the island; a variety of other tropical commodities are produced, but not in large quantities. Maize, rice, beans, and a little wheat are raised, though not sufficient for the demand; also plantains, yuca, yams, and potatoes, which form the chief support of the coloured people and slaves. Immense tracts of land are used only as pasture; and the number of cattle is considerable.

The means of internal communication are very defective, and after rain the roads are quite impassable; but the island being of a long and narrow form, the planter is enabled to bring his produce to the sea without a long land-journey. Hence the activity of the coasting-trade, in which a prodigious number of small vessels are employed in conveying the produce to Havana, and the other ports of shipment. Of late years, several railways have been formed; the principal line (opened in 1838) being from Havana to Guines, a distance of 45 miles.

The commerce of the island has increased very rapidly within the last half-century, more especially since 1809, when the Spanish colonial system was relaxed, and the ports of the island opened to vessels of all nations. In 1837, the value of the exports amounted to $20,346,407; the principal articles being—sugar, 9,060,053 arrobas, value, $7,927,546; coffee, 2,133,567 arrobas; molasses, 114,976 hogsheads; cigars, 792,438 lbs., value, $1,267,496; leaf tobacco, $560,948; besides copper, rum, wax, mahogany, cedar, and other commodities of smaller value. To each of the quantities here specified about a fourth part may be added on account of clandestine exportations from the unlicensed ports. In the same year, the imports amounted to $22,940,357, chiefly consisting of grain, flour, and provisions, from the United States, linens, cottons, wine, hardware, and a variety of other manufactured articles. The chief intercourse is with the United States, the imports from which amounted, in 1837, to $6,546,955, while those from Great Britain did not exceed $1,373,962. This preponderance of the States in the trade of Cuba arises from their furnishing a near and ready market for all the exports of the island, and from their being able to supply provisions in abundance. Spain, since the loss of her colonies on the mainland, endeavours to turn to greater advantage her possession of Cuba, and her trade ranks next, in point of extent, to that of the United States. The smaller share possessed by Great Britain is mainly attributable to her not admitting the productions of Cuba into her ports on the same terms as those of her own colonies.

The other states which participate most largely in the commerce of the island, are the former Spanish colonies, the Hanse Towns, and France; also Russia, to which considerable quantities of produce are exported.

The value of the imports we have noticed does not include negro slaves, of whom about 25,000 are annually brought into Cuba; and to the low price of labour thus induced is in part attributed the increased production which has lately taken place. This infamous traffic is said to be protected by the government for the purpose of retaining the island more securely under the dominion of Spain. By an ordinance of 12th March 1837, free coloured people are prohibited from even landing on its shores.

The number of vessels which annually enter the ports is about 2500, one-half of which are from the United States; about 740 Spanish; nearly 200 English; 50 French, and the same number from the Hanse Towns and the Netherlands, respectively.

Havana, the chief port and capital of Cuba, and one of the greatest commercial cities of the New World, stands on the N. W. side of the island, in 23° 9′ N., 82° 22′ W., on a promontory formed on one side by the open sea, and on the other by a large bay nearly 2½ miles in width;

pop. 130,000, of which nearly one-half reside without the walls. The entrance into the harbour is narrow and deep; and defended on the E. by the Moro Castle, and on the W. by Puntal. It opens into a secure and spacious basin, where there is sufficient depth of water for line-of-battle ships. About 1200 ships enter annually.

The chief other ports are, on the N. side of the island, Matanzas, and on the S. side Santiago-de-Cuba and Trinidad. Besides these, the following are licensed for foreign trade:—Puerto-Principe, Baracoa, Gibara, Cienfuegos, and Manzanillo.

MEASURES AND WEIGHTS, MONEY, DUTIES, &C.

Measures and Weights.—The standards of Spain are those generally in use. In trade the following proportions are commonly observed:—108 varas = 100 Imp. yards, or 1 vara = 33⅓ Imp. inches; the fanega = 3 Winchester, or 2·9 Imp. bushels; the arroba of wine or spirits = 4·1 English wine gallons, or 3·42 Imp. gallons; the quintal of 4 arrobas, each of 25 lbs. = 101¾ lbs. avoirdupois, or 1 arroba = 25 lbs. 7 oz. avoirdupois.

Money.—Accounts are stated in dollars divided into 8 reals, each of 34 maravedis, which are converted by merchants at the fixed rate of $444 for £100, or nearly 4s. 6d. per dollar; the variations of exchange being made by per centages upon the amounts in sterling. Bills on London are drawn at 60 days' sight; and the course of exchange fluctuates from about 6 to 20 per cent. premium: the quotation at Havana, Oct. 19, 1839, was "14½ per cent. premium," or £114, 10s., converted as above = bill on London for £100. At 8 per cent. premium the dollar = 4s. 2d. sterling.

The currency of the island consists of gold doubloons, dollars, and their aliquot parts. [DOUBLOON. DOLLAR.] Paper money is unknown.

The Duties are mostly *ad valorem*, the valuations of the goods being as far as possible fixed by the tariff. On Spanish goods brought direct from the Peninsula, it is 6¼ per cent.; but if brought in foreign vessels, 14¼, and in some cases, 18¼ per cent. On foreign goods from Spain in Spanish vessels, 10¾ per cent., and in a few cases, 13¾ per cent. On foreign goods imported from a foreign country in Spanish vessels, 14¼ per cent., and in some cases 18¼. On goods imported from a foreign country in a foreign vessel, 21¼, and in some cases 27¼ per cent. To these import duties there is always added a supplementary duty of 3 per cent., besides the *balansa* duty of 1 per cent. on the gross amount of the duties previously ascertained. The chief deviation from these *ad valorem* duties is in the case of flour, which if imported from a foreign country in a foreign vessel, is $9½ per barrel, but if from a foreign country in a Spanish vessel, $8½ per barrel; besides the *balanza* of 1 per cent.

The export duty on produce, if sent to Spain in a Spanish vessel, is 2¼ per cent.; if to a foreign port in a Spanish vessel, 4¼; and if in a foreign vessel to a foreign port, 6¼ per cent. These export duties are exclusive of the *balanza* duty of 1 per cent. On sugar, the export duty is 3 reals per box, if shipped in a Spanish, and 4 reals if in a foreign vessel; on tobacco, in foreign vessels to a foreign port, 12¼ per cent.; in Spanish vessels with a foreign destination, 6¼; and in Spanish vessels to a Spanish port, 2¼ per cent.; on the precious metals exported to a foreign port, gold, 1¼, and silver 2¼ per cent.

The Revenues of the island, on an average of the five years ending with 1837, amounted to $8,948,581 per annum; of which the import and export duties formed 61 per cent., and the internal taxes, 22¼ per cent.

A British Loan was raised in 1835 for the purpose of making the railroad between Havana and Guines. Its nominal capital is £450,450, which was issued at 91 per cent., in bonds for £100, £250, and £500 each, bearing 6 per cent. interest; and having 50 coupons for the dividends, which are due in London on 5th March and 5th September. It was agreed that a sinking fund should commence in 1839, in order to redeem the whole by 1860, either by purchase, or payment at par by drawing lots. This loan is secured upon the receipts of the railway, and the revenues of the Royal Commercial and Agricultural Society of Cuba.

Cuba was discovered by Columbus in 1493; and the first settlement was formed by the Spaniards in 1511. In 1762, Havana was taken by the British, but it was restored to Spain at the peace of 1763. The island derives great political importance from its position, which gives it a control over the trade between Europe and all countries lying round the Caribbean Sea and Gulf of Mexico; as vessels returning to Europe from Jamaica, or the coast of South America, are under the necessity of doubling Cabo San Antonio, and proceeding homeward by the Gulf Stream, in order to avoid the opposing force of that current, and of the trade-wind which they have to encounter in attempting a passage either by the Windward or Mona Passages, situated respectively at the W. and E. extremities of Hayti.

CUBEBS (Du. *Koebeben*. Fr. *Cubebes*. Ger. *Kubeben*. It. *Cubebi*. Por. *Cobebas*. Rus. *Kubebii*. Sp. *Cubebas*. Jav. *Kumukus*), a kind of pepper, composed of the dried pedicelled berries of the shrub *Piper cubeba*, a native of Java. They are about the size of black peppercorns, but somewhat wrinkled, and having a short slender stalk. Their colour is externally gray, their smell aromatic, and their taste warm and camphoraceous. Cubebs are imported into Europe from Batavia and Canton, and are used in medicine.

CUBIT, a measure of length, equal 18 inches, or ¼th of a fathom.

CUCUMBER, the cooling fruit of a well known annual (*Cucumis sativus*) of which several varieties are cultivated in this country, mostly in hothouses, the plant being a native of a warm climate. It is chiefly used with us as a salad or condiment; but in Egypt, Syria, and other eastern countries, where it is grown in fields, it forms a considerable part of the food of the lower classes, especially during summer; and its employment for this purpose is repeatedly noticed in Scripture.

WILD CUCUMBER, or **SQUIRTING-GOURD**, a perennial (*Momordica elaterium*), is a native of the S. of Europe. The fruit is oblong, about 1½ inch in length, and of a green colour; and its juice yields the purgative substance known in medicine under the name of elaterium.

CUDBEAR, a dye-stuff, consists of a fine powder, of a violet red colour, and a peculiar but not disagreeable odour; it is prepared in the same manner as orchell, from a species of lichen (*Lecidea tartarea*), imported from Sweden and Norway under the name of rock-moss.

CUMMIN-SEEDS are obtained from an annual umbelliferous plant (*Cuminum cyminum*) resembling fennel, but smaller. It is a native of Egypt, though the seeds are imported chiefly from Sicily and Malta. They are of an ash-gray colour, oval, linear, flat on one side, convex and striated on the other; having a strong unpleasant smell, and a bitter, acrid, aromatic taste. They are to be chosen fresh, and of a greenish colour. These seeds are used in medicine, and also as a condiment.

CURRANT, a hardy berry, produced by a bush (*Ribes*) common in all parts of this country. There are two species; one of a red or yellow colour (*R. rubrum*), remarkable for its mixture of sweetness and acidity; the other of a black colour (*R. nigrum*) without acidity, but containing a powerful and agreeable aromatic principle. Of the former, the finest varieties are, Wilmot's red, the White Dutch, Knight's sweet red, and the common white; of the latter, the best is the Black Naples. These currants are employed in confectionary, and in the manufacture of a kind of wine.

The fruit commonly known in commerce, however, under the name of currants, consists of the small dried grape or berry species of vine, chiefly cultivated in the Morea and the Ionian Islands, from whence about 170,000 cwts. are annually brought to the United Kingdom, where it is extensively used in the making of puddings, confectionary, &c.

CURRENCY, the current money of a country. [COIN. MONEY. EXCHANGE.]

> "The currency I consider to be, in strictness of language, according to the apparent derivation of the term, that part of the circulating medium, such as the coin of the realm, and Bank of England notes and country bank notes (although not a legal tender), which pass current from hand to hand without individual signature, such as appears on drafts or indorsements. I am doubtful whether cheques upon bankers might not be included, from their perfect similarity to bank notes, in many of the purposes for which they are employed; at the same time, there is the feature of distinction which I have mentioned, viz. that cheques require the signature of the party passing the draft, and that they do not pass from hand to hand. Bills of exchange I consider as a part of the general means of distributing the productions and revenues of the country, and therefore as constituting a part of the circulating medium. I consider also, that the simple credits by which goods are in many instances bought and sold, come likewise under the general description of the circulating medium, in as far as the prices of commodities are in question; because a simple contract of sale, whether any payment eventually passes or not, is commonly entered in the price currents without distinction from those for which any actual payment is made. I cannot consider that transferable debts (such as deposits in the hands of bankers, against which the depositors are entitled to pass their drafts) constitute circulating medium, but only the actual transfers." (*Evidence of Thomas Tooke, Esq. Report on Banks of Issue*, 1840, p. 297.)

In some parts of Germany, and in the British colonies in the West Indies and North America, the term currency is applied to the monies of account only.

CUSTOMS, duties levied upon commodities imported or exported. The first statute authorizing the crown to levy such imposts in England was the 3d of Edward I.; and the method long employed in their collection was to affix a certain rate or value upon each kind of merchandise, and to grant upon these rates a *subsidy*, which was generally a *poundage* of 1s. for every 20s. of value fixed in the book of rates; a specific duty, or *tonnage*, being also charged on the importation of each tun of wine, and the exportation of each tun of beer. Hence, in the early acts relating to the customs duties, they are described as *subsidies of tonnage and poundage*. The system of poundage was continued until the reign of Charles II., when, as respects some articles, it was changed for that of specific duties. This course of substitution of specific rates, in place of the valuation of the subsidy, was continued from time to time, and other innovations being adopted, the simplicity of the ancient plan was at length destroyed. The embarrassment to traders thereby produced was increased by the number of acts of Parliament passed for altering the duties or regulations of this branch of revenue. Much was done to remedy these inconveniencies, by a consolidation act, introduced by Mr Pitt in 1787, by other acts of the same kind, and by a Digest of the Customs Laws by Mr Tickling, which was published by the Lords of the Treasury about the year 1815; but the utility of these arrangements and expositions having been impaired by numerous fresh enactments, the government were induced in 1823 to cause the preparation of a new set of laws for the consolidation of the customs. This work was undertaken and performed by Mr James Deacon Hume, then comptroller of the customs in the port of London, and afterwards secretary of the Board of Trade; and the bills prepared by him form the subject of the eleven acts of the 6th Geo. IV. cap. 106, to cap. 116 inclusive, all passed in July 1825. These are as follows :—1*st*, Act for the Management of the Customs; 2*d*, Act for the general Regulation of the Customs; 3*d*, Act for the Prevention of Smuggling; 4*th*, Act for the Encouragement of British Shipping and Navigation; 5*th*, Act for the Registering of British Vessels; 6*th*, Act for granting Duties of Customs; 7*th*, Act for the Warehousing of Goods; 8*th*, Act to grant certain Bounties and Allowances of Customs; 9*th*, Act to regulate the Trade of the British Possessions abroad; 10*th*, Act for regulating the Trade of the Isle of Man; and, 11*th*, Act for regulating Vessels carrying Passengers to foreign Parts. These statutes, which were respectively brought into operation on the 1st January 1826, have, by their comparative simplicity, proved of essential benefit to commerce; and although many alterations have been since made upon them, the same classification remains, and the whole are freed from that bulk and complication formerly the source of so much perplexity and trouble.

The customs duties were long charged indifferently on all sorts of merchandise, whether exported or imported; the principal item being in fact the export duty on wool. But in modern times they have been almost exclusively laid on imported articles; those imposed on commodities sent out of the country being generally adopted rather with the view of checking their exportation, than for the sake of revenue. The duties formerly levied on some descriptions of articles,—as coals, slate, and stone,—carried coastwise from one part of the United Kingdom to another, were repealed in 1831.

The produce of the customs in 1596, in the reign of Elizabeth, did not exceed £50,000. In 1613, it amounted to nearly £150,000, more than two-thirds of which were collected in London. At the Restoration, in 1660, it increased to £421,582; and at the Revolution, in 1689, to £781,987. In 1763, the produce was about £2,000,000; in 1792, £4,407,000; in 1815, £11,360,000; in 1830, £21,084,525; and in 1840, £23,466,117; the great bulk of which, as we have elsewhere explained [Tariff] is collected from a comparatively small number of articles. An account of the sums collected at the different places in the United Kingdom is given under the head Ports.

CUSTOM-HOUSE, a term applied in a general manner to the establishment by means of which the customs revenue is collected, and its regulations enforced; and in a more limited sense to the building within which the business is conducted. The customs department of the revenue is at present managed by a board in London, consisting of nine commissioners, acting under the Treasury, and by collectors and other officers at the different ports. The regulations respecting the appointment, instruction, and conduct of the several officers are chiefly embodied in the act 3 & 4 Wm. IV. c. 51, and in orders issued from time to time by the Commissioners, an account of which will be found in Mr Ellis' "*Laws and Regulations of the Customs*," vol. iii.

Officers in the customs taking any fee or reward, not allowed, shall be dismissed; and if any person (not in the customs) shall give, offer, or promise to give any such fee or reward, he shall forfeit £100 (3 & 4 Wm. IV. c. 51, § 8).

Officers of customs not liable to serve parochial and other local offices. § 12.

Holidays at the customs, only Christmas day and Good Friday, fast-days, and the birthdays of their Majesties, and which shall be kept as public holidays by the officers and servants of the dock companies in the United Kingdom. § 13.

CUSTOMS REGULATIONS. The regulations respecting the importation and exportation of commodities are chiefly embodied in the act 3 & 4 Wm. IV. c. 52, of which the following is a very full abstract :—

Abridgment of an Act for the general Regulation of the Customs, viz. :—3 & 4 Wm. IV. c. 52, with the Alterations by later Enactments (viz. 4 & 5 Wm. IV. c. 89; 6 & 7 Wm. IV. c. 60; 1 & 2 Vict. c. 113).

§ 1. Act 6 Geo. IV. c. 107, and succeeding acts, consolidated.

Inwards.

General Provision, § 2. No goods to be unladen from any ship, or bulk to be broken, after arrival of such ship within four leagues of the coast, before due report and entry has been made, and warrant granted, in the time, place, and manner appointed by the act. All goods not duly reported, or unladen contrary to the act, are forfeited; and if bulk be broken contrary to the act, the master of such ship forfeits £100; and if, after arrival within four leagues of the coast, any alteration be made in the stowage of the cargo, so as to facilitate the unlading of any part, or if any part be staved, destroyed, or thrown overboard, or any package be opened, the ship shall be deemed to have broken bulk. But the following articles may be landed without report, entry, or warrant,—diamonds and bullion, fresh fish of British taking, and imported in British ships, turbots and lobsters, fresh, however taken or imported.

Manifest, § 3. No goods to be imported in any British ship, nor tobacco in any ship, unless the master have on board a manifest thereof, made out and dated and signed by him at the place of taking on board, and authenticated as herein after provided. Every manifest must set forth the name and tonnage of the ship, the name of the master and of the place to which the ship belongs, and of the places of loading and destination, respectively, and contain a particular account and description,—of all the packages on board, with marks and numbers, and the sorts of goods and different kinds of each sort contained therein (to the best of the master's knowledge) and of the particulars of such goods as are stowed loose, and the names of the respective shippers and consignees, as far as the same can be known to the master; and to such particular account shall be subjoined a general account or recapitulation of the total number of the packages of each sort, describing the same by their usual names, or by such descriptions as the same can best be known by, and the different goods therein, and also the total quantities of the different goods stowed loose. Every manifest for tobacco must be distinct from any manifest for other goods, and must contain the particular weight of tobacco in each hogshead, cask, chest, or case, with the tare. If the tobacco be the produce of the dominions of the Grand Seignior, the number of the parcels within each hogshead, cask, or case, must be stated.

§ 4. Before any ship is cleared out from any British possession abroad, or from China, with any goods for the United Kingdom, the master must produce the manifest to the collector or comptroller, or other proper officer, who shall certify upon the same the date of production. In places within the possessions of the East India Company, the servant of the Company who delivers the last despatches, and in China the chief supercargo of the Company, is the proper officer for authenticating the manifest. [This provision will be affected by the alterations in the privileges of the Company by the act 3 & 4 Wm. IV. c. 85.]

§ 5. Before the departure of a ship from a place beyond the seas not under the British dominions, where tobacco has been taken on board for the United Kingdom, the master must produce the manifest to the British consul or other chief officer, if any such reside at or near the place, who must certify upon it the date of production.

§ 6. If the manifest is wanting, or if any goods contained in it be not on board, the master forfeits £100.

§ 7. The master of every ship required to have a manifest, must produce it to any officer of the customs who shall come on board after his arrival within four leagues of the coast, and who shall demand an inspection; and the master must deliver, to the officer who first demands it, a true copy of the manifest signed by himself; and must deliver another copy to any officer who may be the first to demand it within the limits of the port to which the ship is bound. The officers must notify on the manifest and copies the date of production of manifest and receipt of copies, and transmit the copies to the collector and comptroller of the port to which the vessel is first bound, and return the manifest to the master. A master failing to produce the manifest, or deliver the copy, forfeits £100.

Report, § 8. The master of every ship arriving, whether laden or in ballast, must, within twenty-four hours, and before bulk be broken, make report of the ship, and subscribe a declaration to the truth of the same, before the collector or comptroller. The report must state the marks, numbers, and contents of all the parcels of goods on board and the particulars of goods stowed loose—to the best of his knowledge, and of the places where they were taken on board, and of the burden of the ship, and of the country where she was built, or, if British, of the port of registry, and of the country of the owners, and of the name and country of the master, and of the number of the navigators, stating how many are of the country to which the ship belongs, and how many of some other country. The report must further declare, whether and in what cases such ship has broken bulk in the course of her voyage, and what part of the cargo, if any, is intended for importation at the port, and what part, if any, for importation at another port, and what, if any, is prohibited except to be warehoused for exportation, and what, if any, is intended for exportation in such ship, and what surplus stores or stock remain on board, and, if a British ship, what foreign-made sails or cordage, not being standing or running rigging, are in use on board. The master failing to report, or making a false report, forfeits £100.

§ 9. The master of every vessel coming from Africa who has taken on board natives, must state in the report how many he has on board, under penalty of £100, and he or the owners must enter into bond to the extent of £100 to relieve parishes of any expense from such Africans, or be liable in a penalty of £200.

§ 10. If the master report contents of packages as unknown, they may be opened by the officers, and forfeited if prohibited, or charged with duty if importable for home use; unless in either case the commissioners, in consideration of the sort or quality of the goods, or the small rate of duty payable on them, see fit to deliver them for exportation.

§ 11. The master, at the time of making report, must deliver to the collector or comptroller the manifest of the cargo where a manifest is required, and, if required by the collector or comptroller, must produce any bill of lading, or a true copy, for any and every part of the cargo, and answer all questions relating to the ship and cargo, and crew and voyage; and in case of failure in these requisites, or falsehood in performance, or if any bill of lading uttered or produced have not been signed by him, or any such copy have not been received or made by him previously to his leaving the place where the goods were shipped, the master forfeits £100.

§ 12. If part of the cargo of any ship for which a manifest is required be reported for importation at some other port, the collector and comptroller of the port at which some part has been delivered, must notify such delivery on the manifest, and return the same.

§ 13. Every ship must come as quickly up to the proper place of mooring or unlading, as the nature of the port will admit, and without touching at any other place; and must in proceeding thither bring to at stations appointed by the commissioners for boarding by officers; and after arrival she must not remove except directly to some other proper place, and with the knowledge of the proper officer, on penalty of £100 by the master. The commissioners may appoint proper places for the mooring or unlading of ships importing tobacco, and where such ships only shall be moored or unladen; and in case the place so appointed be not within some dock surrounded with walls, if any ship, after having been discharged, remain there, or if any ship not importing tobacco be moored there, the master forfeits £20.

§ 14. The proper officers may board ships arriving, and remain on board until all the goods have been duly delivered; and such officers must have free access to every part of the ship, with power to fasten down hatchways, and to mark any goods before landing, and to lock up, seal, mark, or otherwise secure any goods on board; and if any place, or any box or chest, be locked, and the keys be withheld, such officers, if they be of a degree superior to tidesmen or watermen, may open them in the best manner in their power; and if they be tidesmen or watermen, or only of that degree, they must send for their superior, who may so open them. If goods be found concealed, they become forfeited; and if the officers place any lock, mark, or seal upon any goods on board, and they are wilfully opened, altered, or broken before due delivery, or if any of the goods be secretly conveyed away, or if the hatchways, after having been fastened down by the officer, be opened, the master forfeits £100.

§ 15. When government ships, British or foreign, have goods on board, the commanding officer must, before unloading, or when called on by an officer, deliver an account of quality and quantity, marks and numbers, and names of shippers and consignees, and subscribe declaration, and answer questions, &c., as above, under penalty of £100. Such ships are liable to such searches as merchant ships, and officers may enter them, and bring on shore into the Queen's warehouse goods found on board; subject to such regulations in respect of British ships of war, as may be directed by the Treasury.

§ 16. The master of every British ship returning from any British possessions in the West Indies, must, within ten days of arrival, deliver to the collector or comptroller a list of the names and descriptions of the crew on board at the time of clearing from the United Kingdom, and of the crew on board at the time of arrival in the West Indies, and of every seaman who has deserted or died during the voyage, with the amount of wages due at the time of death, and must subscribe a declaration at the foot of such list, to its truth. Every master omitting forfeits £50. The list is kept by the collector for the inspection of all interested.

Entry, § 17. Every importer must, within fourteen days after arrival, make perfect entry inwards, or entry by bill of sight, of the imported goods, and land the goods; and in default, officers may convey them to the Queen's warehouse. When the cargo of a ship has been discharged, with the exception only of a small quantity, the officers may convey such remaining goods, and may at any time convey small packages or parcels to the warehouse, although the fourteen days have not expired, to be kept waiting due entry during their remainder. If the duties on goods so conveyed to the Queen's warehouse be not paid within 3 months after the 14 days, with charges of removal and rent, they must be sold, and the produce applied, first to the payment of freight and charges, next of duties; the overplus, if any, going to the proprietor.

§ 18. The person entering goods inwards (whether for payment of duty, or to be warehoused upon the first perfect entry, or for payment of duty upon the goods being taken out of the warehouse, or whether such goods be free of duty), must deliver to the collector or comptroller a bill of entry, fairly written [or by 1 & 2 Vict. c. 113, § 3, printed or partly written and partly printed] in words at length, expressing the name of the ship, and of the master, and of the place whence the goods were brought, and the description and situation of the warehouse—if they are to be warehoused, and the name of the person in whose name they are to be entered, and their quantity and description, and the number and denomination of the packages; and in the margin he must delineate the marks and numbers of such packages; and he must pay down any duties payable upon the goods. He must deliver at the same time two or more duplicates, as the case may require, in which sums and numbers may be expressed in figures. The particulars must be written and arranged in such form and manner, and the number of such duplicates must be such as the collector and comptroller may require; and the bill being duly signed by the collector and comptroller, and transmitted to the landing waiter, is his warrant for the landing or delivering.

§ 19. Every person making such entry without consent of the proprietor or consignee, for every offence forfeits £100; but the penalty does not extend to persons acting under the directions of the several dock companies, or other corporate bodies authorized by law to pass entries.

§ 20. No entry or warrant is valid, unless the particulars in the entry correspond with those in the report, and in the manifest, and the certificate or other document, where any is required, by which the importation or entry is authorized, nor unless the goods be properly described in the entry by the denominations, and with the characters and circumstances, according to which they are charged with duty, or may be imported, either for use or exportation; and goods not duly entered, removed from any ship or warehouse, or for the delivery of which, or for any order for the delivery of which, from any warehouse, demand is made, are forfeited.

§ 21. If goods be charged to pay duty according to the number, measure, or weight, such number, measure, or weight must be stated in the entry; and if they be charged according to value, such value must be stated and affirmed by declaration of the importer or his known agent, written upon the entry, and attested by his signature. If the goods be chargeable at the discretion of the officers by *either* criterion, both must be stated. A person making the declaration unauthorized, as by § 19, forfeits £100.

The declaration is as follows:—

"I, *A. B.*, of [*place of abode*] do hereby declare, that I am [the importer, *or* authorized by the importer], of the goods contained in this entry, and that I enter the same [*stating which, if part only*] at the sum of . Witness my hand, the day of

"*A. B.*"

§ 22. If it appear to the officers that goods are not valued according to their true value, they may detain and secure them, and (within 5 days from the landing, if in the ports of London, Leith, or Dublin, or within 7 days if in any other port), take them for the use of the crown; and if a different rate be charged, according as the value of the goods is described as above or below any particular price, and they are valued in the entry for the lower rate, and it appear to the officers that they are liable to the higher rate, they may be so taken. The commissioners, in such cases, cause the amount of such valuation, together with an addition of 10 per cent., and the duties paid upon entry, to be paid to the importer or proprietor in full satisfaction, and dispose of the goods for the benefit of the crown; and if the produce exceed the sums and charges, one moiety of the overplus goes to the officer who detained the goods; and the remainder is carried to account as duties of customs.

§ 23. The value of goods imported by the East India Company is ascertained by the gross price which they bring at the Company's sales, and the Company is required to sell all goods paying duty by their value, within three years from the importation, and give notice to the officers of the time and place.

§ 24. If the importer, or his agent after full conference with him, declare before the collector or comptroller that he cannot, for want of full information, make a full or perfect entry, and subscribe a declaration to the truth thereof, the collector and comptroller may receive an entry by bill of sight for the parcels of such goods, by the best description which can be given, and may grant warrant that they may be provisionally landed, and be examined by the importer, in presence of the proper officers; and within three days after goods have been so landed, the importer must make a full or perfect entry, and either pay all duties or duly warehouse the goods, according to the purport of the full or perfect entry. When perfect entry is made of goods so provisionally landed, the regulations of § 20 apply. If money have been deposited upon any entry by bill of sight, on account of the duties which may be found to be payable, the officers may deliver, in virtue of the warrant for landing the same, any quantity of goods the duty on which does not exceed the sum.

§ 25. In default of perfect entry within 3 days, the goods may be taken to the Queen's warehouse; and if the importer do not, within one month after landing, make perfect entry, and pay the duties on such parts as can be entered for home use, together with charges of removal and of warehouse rent, the goods must be sold for payment of duties (or for exportation, if they be such as cannot be entered for home use, or be not worth the duties and charges), and for payment of charges; the overplus, if any, being paid to the importer or proprietor.

§ 26. The East India Company may, without proof, enter by bill of sight, to be landed and secured as the commissioners may require, goods imported by them, or by any other person from within the limits of their charter—with the consent of such person, upon condition to cause perfect entry to be made within 3 months from date of importation, either to warehouse the same or to pay the duties as follows, viz.: if the goods be charged duty according to the value, to pay within 4 months from the sale; and if according to the number, measure, or weight, to pay one moiety within 6, and the other within 12 calendar months from the time of importation; the goods to be secured as the commissioners may require, until duly entered, and the duties paid, or until duly exported. Any person importing goods from the Company's territory into the port of London, may enter them in his own name, on giving security by bond, to the satisfaction of the commissioners, on the like conditions, provided the goods be entered in some warehouse under the superintendence of the Company.

§ 27. In case of any default in the above regulations, as to due entry and payment of duty, the commissioners may cause the goods to be sold for payment of duties (or for exportation, if they be such as cannot be entered for home use), and for payment of charges, the overplus, if any, being paid to the proprietor.

§ 28. When goods are found fraudulently concealed in packages landed by bill of sight, the whole contents of the packages are forfeited.

§ 29. The East India Company are to pay the customs duties incurred by them at the respective times when they become due, and obtain from the receiver-general a receipt, which must be taken by the collector as cash.

§ 30. If goods rated to pay duty according to number, measure, or weight (with exceptions after mentioned), receive damage during the voyage, an abatement of duties is allowed in proportion to the damage, provided proof be made to the satisfaction of the commissioners, or of the proper officers, that the damage was received after the goods were shipped, and before they were landed, and provided the claim be made at the time of the first examination.

§ 31. On the claim being so made, the officers examine the goods, and may state the proportion of damage, according to their opinion, and make a proportionate abatement; but if the officers be incompetent to estimate the damage, or the importer be not satisfied, the collector and comptroller must choose two indifferent merchants experienced in the nature and value of such goods, to examine them, who subscribe a declaration, stating in what proportion they judge them lessened in value, and the officers may make abatement accordingly.

§ 32. No abatement is to be made for damage to any of the following goods, viz.:—Cocoa, coffee, oranges, pepper, currants, raisins, figs, tobacco, lemons, and wine [and by 4 & 5 Wm. IV. c. 89, § 5, certain drugs are added to the list, viz.:—cantharides, cocculus Indicus, Guinea grains, jalap, ipecacuanha, nux vomica, opium, rhubarb, sarsaparilla, and senna].

§ 33. It is lawful to reimport in a ship of any country, goods (with the exceptions after stated) which have been legally exported, and to enter them by bill of store, referring to the entry outwards, and exportation, provided the property continue in the person by whom, or on whose account they were exported, and that the reimportation take place within 6 years from the date of exportation. [By 6 & 7 Wm. IV. c. 60, § 2, this provision is so far altered, that if the proprietor be absent, the goods may be entered by bill of store, on production of a declaration by him of their identity and of their not having been sold, made before the consul or other British authority, at his place of residence]; and if the goods so returned be foreign, which had before been legally imported, the same duties are payable as would, at the time of reimportation, be payable on the like goods, under the same circumstances of importation, as those under which such goods had been originally imported, or such goods may be warehoused as the like goods might be warehoused upon a first importation: Provided that the goods enumerated in the table following cannot be reimported for home use upon the ground that they had been legally exported, but are deemed foreign goods, whether originally such or not, and deemed to be imported for the first time into the United Kingdom:

A TABLE OF GOODS EXPORTED WHICH MAY NOT BE REIMPORTED FOR HOME USE.

Corn, grain, meal, flour and malt, hops, tobacco, tea.

Goods for which any bounty or drawback of Excise had been received on exportation, unless by special permission of the commissioners, and on repayment of the bounty or drawback.

All goods for which bill of store cannot be issued, as hereafter explained, except small remnants of British goods, by special permission of the commissioners, upon proof to their satisfaction that they are British, and had not been sold.

§ 34. The person in whose name goods so reimported were entered for exportation must deliver to the searcher at the port of exportation an exact account, signed by him, of the particulars of the goods, referring to the entry and clearance outwards and to the return inwards, with the marks and numbers of the packages, both inwards and outwards; and thereupon the searcher, finding that the goods were legally exported, grants a bill of store; and if the person in whose name they were entered for exportation was not the proprietor, but his agent, he must declare on oath on the bill of store the name of his employer; and if the person to whom the returned goods are consigned be not the proprietor and exporter, he must subscribe a declaration on the bill of store of the name of the person for whose use the goods have been consigned to him; and the real proprietor, ascertained to be such, must subscribe a declaration on the bill of store to the identity of the goods so exported and so returned, and that he was at the time of exportation and of re-importation the proprietor, and that the goods had not during such time been sold or disposed of to any other person; the declaration to be made before the collectors or comptrollers at the ports of exportation and importation respectively; whereupon the collector and comptroller shall admit such goods to entry by bill of store, and grant their warrant accordingly.

§ 35. Surplus stores are subject to the same duties, prohibitions, restrictions, and regulations, as the like sorts of goods when imported by way of merchandise; but if it appear to the collector and comptroller that the quantity or description of such stores is not excessive or unsuitable, under all the circumstances of the voyage, they may permit them to be entered for the private use of the master, purser, or owner, or of any passenger, to whom they may belong, on payment of the proper duties, or to be warehoused for the future use of the ship, although the same could not be legally imported by way of merchandise.

§ 36. No goods can be entered as being from any British Possession in America (if any benefit attach to such distinction), unless the master deliver to the collector or comptroller a certificate, under the hand of the proper officer of the place where such goods were taken on board, of the due clearance of the ship, containing an account of such goods.

§ 37. Before sugar, coffee, cocoa, or spirits are entered as the produce of some British Possession in America, or the Mauritius, the master must deliver to the collector or comptroller a certificate, under the hand of the proper officer where such goods were taken on board, testifying that proof had been made as required by law, that the goods are of such produce, stating place of produce, quantity and quality, number and denomination of the packages, and name of ship and master; and the master must also subscribe a declaration before the collector or comptroller, that such certificate was received by him at the place of taking on board, and that the goods are the same as are mentioned therein.

§ 38. Before sugar is entered as the produce of any British Possession within the East India Company's charter, the master must deliver to the collector or comptroller a certificate under the hand and seal of the proper officer at the place of taking on board, testifying that oath had been made before him by the shipper, that the same was really and *bona fide* such produce; and the master must also subscribe a declaration before the collector or comptroller, that such certificate was received by him at the place of taking on board, and that the sugar is the same as is mentioned therein. [By 5 & 6 Wm. IV. c. 66, § 2, no coffee can be entered as such produce, unless the master deliver to the collector or comptroller a certificate under the hand and seal of the proper officer at the place of taking on board, stating that a declaration had been signed before him (the contents of which he examined, and believed to be true) by the shipper, to the effect that the coffee was really the produce of such British Possession; nor unless the master subscribe a declaration, that the certificate was received by him at the place of taking on board, and that the coffee imported is the same as therein mentioned.]

§ 39. Before any wine is entered as the produce of the Cape of Good Hope, the master must deliver to the collector or comptroller a certificate under the hand of the proper officer, testifying that proof had been made as required by law, that the wine is the produce of the Cape or its dependencies, stating the quantity and sort, and the number and denomination of the packages; and the master must subscribe a declaration before the collector or comptroller, that the certificate was received by him at the Cape, and that the wine is the same as is mentioned therein.

§ 40. It is lawful to import goods of the produce or manufacture of the Channel Islands or Man without payment of duty (except in the cases hereafter mentioned); and such goods are not deemed included in any duties imposed by any act to be made on the importation of goods generally from parts beyond the seas: Provided that such goods may be charged with any proportion of such duties as shall fairly countervail any duties of excise, or any coast duty, payable on the like goods, the produce of the part of the United Kingdom into which they shall be imported [and by 1 & 2 Vict. c. 113, § 4, this is extended to any excise duty payable on the materials]. The exemption does not extend to manufactures from materials the produce of any foreign country, except manufactures of linen and cotton made in and imported from the Isle of Man.

§ 41. Before goods can be entered as the produce of these islands (if any benefit attach to such distinction), the master delivers to the collector or comptroller a certificate from the governor or commander, that proof had been made, as required by law, that the goods were of the produce of the island, stating the quantity and quality, and the number and denomination of the packages; while the master must subscribe a declaration that the certificate was received at the place of taking on board, and that the goods are the same as are mentioned therein.

§ 42. The Treasury may permit goods, the produce of the British Possessions or Fisheries in North America, imported into Guernsey or Jersey direct, to be imported into the United Kingdom for home use direct from those islands, under such regulations as may be directed.

§ 43. No vessel arriving on the coast of England from the Channel Islands or Man, wholly laden with stone, the production thereof, is liable to be piloted by pilots licensed by the Trinity House.

§ 44. Fresh fish of British taking, and imported in British ships, and fresh lobsters and turbots, however taken or in whatever ship, and cured fish of British taking and curing, imported in British ships, may be imported duty free; but before cured fish can be so entered free of duty, the master must subscribe a declaration before the collector or comptroller, that such fish was actually caught and taken in British ships, and cured by the crews of such ships, or by British subjects.

§ 45. Before blubber, train oil, spermaceti oil, head matter, or whale fins, are entered as the produce of sea animals caught wholly by her Majesty's subjects usually residing in some part of her Majesty's dominions, and imported from some British Possession, the master must deliver to the collector or comptroller a certificate under the hand of the proper officer of the British Possession, or if no such officer be there, of two principal inhabitants at the place of shipment, notifying that oath had been made by the shipper, that the goods were the produce of sea animals taken wholly by British vessels. The master must also subscribe a declaration before the collector or comptroller, that the certificate was received by him at the place of taking on board, and that the goods are the same as mentioned therein; and the importer must subscribe a declaration at the time of entry, that, to the best of his knowledge and belief, the same were the produce of sea animals taken wholly by British vessels.

§ 46. Before blubber, train oil, spermaceti oil, head matter, or whale fins, imported direct from the fishery, are entered as the produce of sea animals caught wholly by the crews of ships cleared out from the United Kingdom, or from the Channel Islands or Man, the master must subscribe a declaration, along with the importer (to the best of his knowledge and belief), that the same are the produce, and caught, &c. as above; if the ship has cleared out from any of the islands, specifying which.

§ 47. Upon the return of any ship from Greenland or Davis' Straits to the United Kingdom with blubber, the importers may cause it to be boiled at the port of importation, under the inspection of the officers; and the oil produced may be admitted to entry, and the duties be paid, as if so imported, and the oil, if afterwards exported, is not subject to duty of exportation as a manufacture of the United Kingdom.

§ 48. No goods are deemed imported from any particular place unless they be imported direct, and have been laden on board the importing ship, either as the first shipment, or after they have been actually landed.

§ 49, With regard to the sale of goods, duty-free, for salvage, is repealed by 4 & 5 Wm. IV. c. 89, § 4.

§ 50. All foreign goods, derelict, jetsam, flotsam, and wreck, brought or coming into the United Kingdom or the Isle of Man, are subject to the same duties as goods of the like kind imported; and if any question arise as to the origin of such goods, they are to be deemed of the growth, produce, or manufacture of such place as the commissioners may upon investigation determine: Moreover, if any such goods be of such sorts as are entitled to allowance for damage, the allowance is to be made under such regulations and conditions as the commissioners may from time to time direct. [The next provision is, that all such goods as cannot be sold for the duty, are to be delivered to the lord of the manor, and are deemed unenumerated. This is repealed by 6 & 7 Wm. IV. c. 60, § 3, which provides that the commissioners or officers may receive proof of the extent of damage, and abate accordingly.]

§ 51. If any person have possession of such goods, without giving notice to the proper officer within 24 hours, or without on demand paying the duties, or delivering the goods to the proper officer, he forfeits £100; and if any person be accessory to removing or altering in quantity or quality any such goods, or opening or altering the packages before the goods are deposited in a warehouse in the custody of the officers, he forfeits £100, and in default of payment of duties within 18 months from the time of deposit, the goods may be sold in like manner and for the like purposes as goods imported may, in such default, be sold: Provided that the lord of the manor (see § 50), or if there be none, the person having possession of the goods, is at liberty to retain them in his custody, giving bond, with two sureties, to be approved by the proper officer, in treble the value of the goods, for payment of the duties at the end of a year and day, or to deliver the goods to the proper officer in the same state and condition as they were in at the time of taking possession.

§ 52. For the purpose of subjecting some goods to excise regulations, it is enacted that no goods subject to any regulations of excise are to leave the charge of the officers of customs (although the same may have been duly entered, and the full duties paid), until the goods have also been duly entered with the officers of excise, and permit granted, nor unless the permit correspond in all particulars with the warrant of the officers of the customs: Provided that the entry must not be received, nor the permit granted, until a certificate have been produced of the particulars of the goods, and of the warrant for the same, under the hand of the officers of the customs who have them in charge, and provided that, if upon any occasion, it appear necessary, officers of excise may attend the delivery by the officers of the customs, and require that the goods be delivered only in their presence; and the officers of excise may count, measure, gauge, or weigh such goods, and fully examine them, and treat them in all respects as if they were included in the excise regulations.

§ 53. To distinguish foreign from British articles, the commissioners, after goods have been entered, and before they are discharged and delivered to the importer, may mark or stamp them in such manner as they may deem fit for the security of the revenue, and by such officer as they may appoint for the purpose.

§ 54. Every order by the commissioners, in respect of marking or stamping goods, must be published in the London and Dublin Gazettes.

§ 55. Persons forging, or possessing forged stamps, are liable in a penalty of £200.

§ 56. No goods, except diamonds, bullion, fresh fish of British taking, and imported in British ships, and turbots and lobsters, are permitted to be unshipped from ships arriving from parts beyond the seas, or landed or put on shore, but on days not being Sundays or holidays, and in the daytime, or from the 1st of September until the last of March, between sun-rising and sun-setting, and from the last day of March to the 1st of September, between 7 o'clock A.M. and 4 o'clock P.M.; nor can goods, with the same exceptions, be unshipped or landed unless in the presence or with the authority of the proper officer, and at one of the legal quays appointed by royal authority, or at some wharf, quay, or place appointed by the commissioners for the landing of goods by sufferance; and no goods, with the same exceptions, having been unshipped, are permitted to be transhipped, or after having been put into any boat or craft to be landed, are permitted to be removed into any other boat or craft previously to their being landed, without the permission or authority of the proper officer.

§ 57. The unshipping, carrying, and landing of goods, and the bringing them to the proper place for examination or weighing, and the putting them into, and taking them out of, the scales, must be performed by or at the expense of the importer.

§ 58. The goods in the following table are either absolutely prohibited, or only to be imported with the annexed restrictions:—

A TABLE OF PROHIBITIONS AND RESTRICTIONS INWARDS.

List of Goods absolutely prohibited to be imported.

Arms, ammunition, and utensils of war, by way of merchandise, except by license from her Majesty, for furnishing her Majesty's public stores only. Beef, fresh or corned, or slightly salted. Books, viz. first composed, or written, or printed in the United Kingdom, and printed or reprinted in any other country, imported for sale, except books not reprinted in the United Kingdom within 20 years, or being parts of collections, the greater parts of which had been composed or written abroad. Cattle—great. Clocks and watches of any metal, impressed with any mark or stamp appearing to be or to represent any legal British assay, mark, or stamp, or purporting by any mark or appearance to be of the manufacture of the United Kingdom, or not having the name and place of abode of some foreign maker abroad visible on the frame and also on the face, or not being in a complete state, with all the parts properly fixed in the case. Coin, viz. false money, or counterfeit sterling. Silver of the realm, or any money purporting to be such, not being of the established standard in weight or fineness. Fish of foreign taking or curing, or in foreign vessels; except turbots and lobsters, stock fish, live eels, anchovies, sturgeon, botargo, and caviare. [Salt or dried fish may be imported for warehousing, 1 & 2 Vict. c. 113, § 7.] Gunpowder, except by license from her Majesty, such license to be granted for the furnishing her Majesty's stores only. Lamb. Malt. Mutton. Pork, fresh, or corned, or slightly salted. Sheep. Snuff-work. Spirits from the Isle of Man. Swine. Tobacco stalks stripped from the leaf, whether manufactured or not. Tobacco stalk flour.

List of Goods subject to certain Restrictions on Importation.

China—goods from, unless by the East India Company, and into the port of London, during the continuance of their exclusive privileges [now expired]. East India—goods of places within the limits of the East India Company's charter, unless into such ports as shall be approved of by the Lords of the Treasury, and declared by order in council to be fit and proper for such importation. Gloves of leather, unless in ships of 70 tons [or, by 6 & 7 Wm. IV. c. 60, § 5, if measured by the new measurement act, 60 tons] or upwards, and in packages containing 100 dozen pairs of such gloves. Hides, skins, horns, or hoofs, or any other part of cattle or beast, her Majesty may by order in council prohibit, in order to prevent any contagious distemper. Parts of articles, viz. any distinct or separate part of any article not accompanied by the other part or all the other parts of such article, so as to be complete and perfect, if such article be subject to duty according to the value thereof. Silk: manufactures of silk, being the manufactures of Europe, unless into the port of London, or into the port of Dublin direct from Bordeaux, or into the port of Dover direct from Calais [or by 4 & 5 Wm. IV. c. 89, § 6, direct from Boulogne], and unless in a ship or vessel of 70 tons [or of 60 tons by the new measurement] or upwards, or into the port of Dover in a vessel of the burden of 60 tons at least, with license of the commissioners of the customs. Spirits, not being perfumed or medicinal spirits, viz. all spirits, unless in ships of 70 tons [or of 60 tons by the new measurement] or upwards; rum of and from the British plantations, if in casks, unless in casks containing not less than 20 galls. [by 4 & 5 Wm. IV. c. 89, § 8, all vessels and packages, except glass bottles, are counted casks, in regard to this and the immediately succeeding article]; all other spirits, if in casks, unless in casks containing not less than 40 galls. [reduced by 6 & 7 Wm. IV. c. 60, § 4, to 20 galls.]. Tea, unless from the place of its growth, and by the East India Company, and into the port of London, during the continuance of their exclusive privileges of trade. Tobacco and snuff, viz. unless in a ship of the burden of 120 tons or upwards; tobacco of and imported from the state of Colombia, and made up in rolls, unless in packages containing at least 320 lbs. weight of such rolls; segars, unless in packages containing 100 lbs. weight of segars; all other tobacco and snuff, unless in hogsheads, casks, chests, or cases, each of which shall contain of net tobacco or snuff at least 100 lbs. weight, if from the East Indies, or 450 lbs. [reduced, by 6 & 7 Wm. IV. c. 60, § 4, to 300 lbs.] weight, if from any other place, and not packed in bags or packages within any such hogshead, cask, chest, or case, nor separated nor divided in any manner whatever, except tobacco of the dominions of the Turkish empire, which may be packed in inward bags or packages, or separated or divided in any manner within the outward package, provided such outward package be a hogshead, cask, chest, or case, and contain 450 [300] lbs. net at least [but by 4 & 5 Wm. IV. c. 89, § 7, none of these restrictions apply to tobacco direct from Mexico, or South America, or the islands of Cuba and St Domingo, in packages of not less than 80 lbs.]; and unless the particular weight of tobacco or snuff in each hogshead, cask, chest, or case, with the tare of the same, be marked thereon; and unless into the ports of London, Liverpool, Bristol, Lancaster, Cowes, Falmouth, Whitehaven, Hull, Port-Glasgow, Greenock, Leith, Newcastle-upon-Tyne, Plymouth, Belfast, Cork, Drogheda, Dublin, Galway, Limerick, Londonderry, Newry, Sligo, Waterford, and Wexford; or into some other port or ports which may hereafter be appointed for such purpose by the Lords Commissioners of her Majesty's Treasury; such appointments in Great Britain being published in the London Gazette, and such appointments in Ireland being published in the Dublin Gazette; but any ship wholly laden with tobacco may come into the ports of Cowes or Falmouth to wait for orders, and there remain 14 days, provided due report of such ship be made by the master with the collector or comptroller of such port. And all goods from the Isle of Man, except such as be of the growth, produce, or manufacture thereof. And any goods imported contrary to any of these prohibitions or restrictions are forfeited.

§ 59. But goods may be imported to be warehoused, without payment of duty at the time of the first entry, or notwithstanding their being prohibited to be imported for home use, except the following, viz.:—Goods prohibited on account of the package in which they are contained, or the tonnage of the ship in which they are laden; tea and goods from China in other than British ships, or by other persons than the East India Company during the continuance of their exclusive privileges of trade [now expired]; gunpowder, arms, ammunition, or utensils of war; dried or salted fish, not being stock fish; infected hides, skins, horns, hoofs, or any other part of any cattle or beast; counterfeit coin or tokens; books first composed or written, or printed and published in the United Kingdom, and reprinted in any other country or place; copies of prints first engraved, etched, drawn, or designed in the United Kingdom; copies of casts of sculptures or models first made in the United Kingdom; clocks or watches, being such as are prohibited to be imported for home use.

§ 60. If by reason of the sort of any goods, or of the place from whence, or the country or navigation of the ship in which any goods are imported, they may not be used in the United Kingdom, they can only be entered to be warehoused, and it must be declared upon the entry that they are entered to be warehoused for exportation only.

OUTWARDS.

General Provisions, § 61. No goods can be shipped, or waterborne to be shipped, in any place in the United Kingdom, or the Isle of Man, to be carried to parts beyond the seas, before due entry outwards of ship and entry of goods have been made, and cocket granted, nor before the goods have been duly cleared for shipment as after mentioned; and no stores can be shipped for the use of such ship, nor can goods be deemed stores, except such as are borne upon the victualling bill, and no goods can be so shipped or waterborne to be shipped, except as directed by the act, under penalty of forfeiture of the goods or stores.

§ 62. The master of any ship with goods or stores on board departing without being duly cleared outwards, forfeits £100.

§ 63. The master of every ship departing, upon application receives from the searcher a victualling bill for the shipment of such stores as he may require, and as may be allowed by the collector and comptroller, for the use of the ship, according to the voyage, and no articles are deemed stores except such as are so borne upon the victualling bill.

Ship's Entry, § 64. The master of every ship in which goods are to be exported, must, before taking on board, deliver to the collector or comptroller a certificate of the clearance inwards or coastwise of such ship of her last voyage, specifying what goods, if any, have been reported inwards for exportation; and an account, signed by the master or his agent, of the entry outwards of the ship for her intended voyage, setting forth the name and tonnage, the name of the place to which she belongs if a British ship, or of the country if a foreign ship, the name of the master, and the name of the place for which she is bound if any goods are to be shipped for the same, and the name of the place at which she is to take in her lading, and if the ship have commenced her lading at some other port, the master must state the name of the port at which any goods have been so laden, and produce a certificate from the searcher that the cockets for such goods have been delivered to him, the particulars of the account to be written and arranged as the collector and comptroller may require. The account is the entry outwards, and must be entered in a book by the collector for the information of all interested; and if any goods be taken on board any ship before she be entered outwards, the master forfeits £100; but where it becomes necessary to lade any heavy goods before the whole of the inward cargo is discharged, the collector and comptroller may issue a stiffning order for that purpose, previous to the entry outwards.

Entry of Goods, § 65. The person entering outwards goods to be exported, must deliver to the collector or comptroller a bill of entry fairly written [or printed as above, see § 18], in words at length, expressing the name of the ship and of the master, and of the place to which the goods are to be exported, and of the person in whose name they are to be entered, and the quantities and proper denominations or descriptions of the several sorts, and must pay any duties due upon the exportation; and deliver at the same time one or more duplicates of the bill, in which sums and numbers may be expressed in figures. The particulars in the bill must be so written and arranged, and the number of duplicates must be such, as the collector and comptroller may require. The collector and comptroller then cause to be prepared, and sign, a cocket for the goods, to be delivered to the person who makes entry, and who is responsible for the proper use of it.

§ 66. If any drawback or bounty be allowable upon the exportation, or any duty be payable, or any exemption from duty claimed, or if the goods be exportable only according to some particular regulation, or under some restriction or condition, or for some particular purpose or destination, they must be entered and cleared by the denominations or descriptions used or referred to in the granting of the drawback, or the directing of the regulation, &c.; and if the goods are charged according to the value, such value must be stated in the entry, and be affirmed by the declaration of the exporter or his known agent, to be made upon the entry, and attested by his signature; and if any person make such declaration, not being the exporter or his agent, he forfeits £100. The declaration is to be made as follows, and to be binding upon the person making it, viz.:—

"I, *A. B.* of [*place of abode*] do hereby declare, that I am the exporter of the goods mentioned in this entry, [*or*, that I am duly authorized by him,] and I do enter the same at the value of . Witness my hand the day of

"*A. B.*"

§ 67. If upon examination it appear to the officers that the goods are not valued according to the true value, they may be detained, and (within two days) taken and disposed of for the benefit of the crown, as above provided with regard to goods imported, except that no sum in addition to the amount of the valuation and the duties paid is to be paid to the exporter or proprietor.

§ 68. The person intending to enter outwards any foreign goods for drawback, at any other port than that at which the duties inwards had been paid, must first deliver to the collector or comptroller where the duties were paid two or more bills, as the case may require, of the particulars of the importation, and of the entry outwards intended to be made; and thereupon the collector and comptroller, finding such bills to agree with the entry inwards, writes off such goods from the same, and issues a certificate of the entry, with such particulars as may be necessary for the computation of the drawback, setting forth the destination of the goods, the person in whose name they are to be entered, and the name of his port. The certificate, with two or more bills of the same, as the case may require, in which sums and numbers may be expressed in figures, being delivered to the collector or comptroller of the port of exportation, is the entry outwards, and such collector and comptroller causes a cocket to be written and delivered as above stated.

§ 69. No cocket can be granted for coals to the Isle of Man, or any British Possession, until the exporter give security by bond in a penal sum of forty shillings the chaldron, with condition that the same shall be landed at the place for which they are exported, or otherwise accounted for to the satisfaction of the commissioners, and also with condition to produce (within such time as the commissioners may require, to be expressed in the bond) a certificate of the landing, under the hand of the proper officer at the place of destination. The bond is not liable to stamp duty.

Clearance of Goods, § 70. Before any part of the goods for which a cocket has been granted can be shipped or waterborne to be shipped, they must be duly cleared with the searcher; and before being cleared, the particulars for each clearance must be indorsed on the cocket, together with the number and denomination or description of the packages; and in the margin of the indorsement marks and numbers of the packages must be delineated; and to each indorsement must be subjoined, in words at length, an account of the total quantities of each sort of goods intended in such indorsement, and the total number of each sort of package, distinguishing such goods as are to be cleared for any bounty or drawback, and also such as are subject to duty on exportation, or entitled to exemption, and also such as can only be exported by virtue of some particular order or authority, or under some particular restriction or condition, or for some particular purpose or destination; all goods shipped or waterborne to be shipped, without being duly cleared, are forfeited.

§ 71. The person clearing for shipment must, on each occasion, produce the cocket so indorsed to the searcher, and deliver a shipping bill or copy of such indorsement, referring by names and date to the cocket, and must obtain the order of the searcher for the shipment, and the particulars in the indorsement and shipping bill must be written and arranged as the collector and comptroller may require.

§ 72. Coals brought coastwise may be entered for exportation without being landed, provided the officers be satisfied that the quantity left on board does not exceed the quantity so entered outwards.

§ 73. Upon the clearance of goods of home produce or manufacture not liable to export duty, an account, containing an accurate specification of quantity, quality, and value, together with a declaration to the truth, signed by the exporter or his known agent, must be delivered to the searcher by the person clearing; and if the declaration be false, the person signing forfeits £20. The searcher may call for the invoice, bills of parcels, and such other documents relating to the goods as he may think necessary for ascertaining their true value. It is provided, that if the exporter or agent subscribe a declaration before the collector or comptroller that the value cannot be ascertained in time for the shipment, and deliver it to the searcher at the time of clearance, a further time of three months is allowed for the delivery of the separate shipping bill before the penalty is incurred.

§ 74. No drawback of excise is allowed on goods so cleared, unless the person intending to claim have given notice to the officer of excise, as required by the excise regulations, and have obtained and produced to the searcher at the time of clearing a proper document from the officer of excise, containing the necessary description of the goods; and if the goods upon examination be found to correspond in all respects with the particulars contained in the document, and such goods be duly exported, the searcher shall, if required, certify the shipment upon the document, and transmit it to the officer of excise.

§ 75. The officer of excise, if he see fit, may assist at the examination, and mark or seal the packages, and keep joint charge of them, together with the searcher, until they have been finally delivered into the sole charge of the searcher, to be shipped and exported under his care.

§ 76. If any goods, subject to duty or restriction in respect of exportation, or any goods to be shipped for any drawback or bounty, are brought to any quay, wharf, &c. to be shipped for exportation, and do not agree with the indorsement on the cocket, or with the shipping bill, they are forfeited; and if goods prohibited to be exported be found in any package so brought, it and its contents are forfeited.

§ 77. The searcher may open all packages, and examine their contents, which, if found to correspond with the cocket and clearance, he must repack, at his own charge, to be allowed by the commissioners as they see fit.

Clearance of Ship, § 78. Before any ship is cleared outwards with goods shipped on board, the master must deliver a content of the ship to the searcher, setting forth name and tonnage, place of destination, and name of master, and also an account of the goods and packages, and of the marks and numbers thereon, and a like account of the goods on board, if any, which had been reported inwards for exportation, so far as any of such particulars can be known by him; and also before clearance, the cockets, with the indorsements and clearances for the goods shipped, must be finally delivered by the shippers to the searcher, who files them together, and attaches with a seal a label to the file, showing the number of cockets contained in the file, and compares the particulars of the goods in the cockets with the particulars in the content, and attests the correctness by his signature on the label and on the content. The master must also sign a declaration before the collector or comptroller to the truth of the content, and answer such questions concerning the ship, the cargo, and the voyage, as may be demanded; whereupon the collector or comptroller must clear the ship for her voyage, and notify the clearance and the date upon the content, and upon the label to the file of cockets, and upon the victualling bill, and also in the book of ships' entries outwards, for the information of all interested, and must transmit the content, and the cockets, and the victualling bill to the searcher. The particulars in the content must be written and arranged as the collector and comptroller may require.

§ 79. The file of cockets and the victualling bill are thereupon delivered by the searcher to the master at such station, and in such manner as may be appointed by the commissioners; and they are kept by the master as the authority for departing with the parcels and packages of goods and stores on board, so far as they agree with the indorsements and the victualling bill.

§ 80. If any ship is to depart in ballast, having no goods on board except the stores borne upon the victualling bill, or any goods reported inwards for exportation, the master must, before her departure, answer to the collector or comptroller such questions touching her departure and destination as may be demanded of him. The collector or comptroller then clears the ship in ballast, and notifies such clearance and the date on the victualling bill, and also in the book of ships' entries outwards, for the information of all interested; and the victualling bill must be kept by the master as the clearance.

§ 81. If there be on board any goods of the inward cargo which were reported for exportation, the master must, before clearance outwards, deliver to the searcher a copy of the report inwards of such goods, certified by the collector and comptroller; and the copy, found to correspond with the remaining goods, is the authority to the searcher to pass the ship with such goods on board; and being signed by the searcher, and filed with the cockets, is the clearance of the ship for those goods.

§ 82. The master may pass an entry and receive a cocket in his name for the necessary personal baggage of passengers, and may duly clear such baggage for shipment in their behalf, stating in such clearances the particulars of packages and the names of passengers; and if the ship is to take no other goods than the necessary personal baggage of passengers, the master may enter the ship outwards in ballast for passengers only, and the ship will be deemed a ship in ballast, and will be described in the clearance, on the content, the label, and the victualling bill, and in the book of entries, as a ship cleared in ballast, except as to the necessary personal baggage of passengers.

§ 83. If the master and crew of any foreign ship which is to depart in ballast from the United Kingdom for parts beyond the seas shall be desirous to take on board chalk rubbish by way of ballast, or to take with them for their private use any small quantities of goods of British manufacture, such master, without entering such ship outwards, may pass an entry in his name, and receive a cocket free of any export duty for all such goods, under the general denomination of "British manufactures not prohibited to be exported," being for the use of the master and crew, and not of greater value than in the proportion of £20 for the master, £10 for the mate, and £5 for each of the crew, and stating that the ship is in ballast. The master must clear such goods in behalf of himself and crew, stating the particulars of the goods and packages, and the names of the crew making use of the privilege. The ship is then deemed a ship in ballast, and is cleared as such, and without a content; and the clearance is notified by the collector or comptroller on the label to the cockets, and on the victualling bill, and in the book of entries, as a clearance in ballast, except as to the privilege. [By 4 & 5 Wm. IV. c. 89, § 3, slates and chalk are deemed ballast.]

§ 84. The officers may go on board any ship after clearance, any where within four leagues of the coast, and demand the file of cockets and the victualling bill, and if there be goods or stores not contained in the indorsements on the cockets nor in the victualling bill, they are forfeited; and if goods contained in the indorsements be not on board, the master forfeits £20 for each package; and if any cocket be at any time falsified, the person falsifying or wilfully using it forfeits £100.

§ 85. Every ship departing from any port must bring to at such stations within the port as may be appointed by the commissioners, for the landing of officers, or for further examination.

Debenture Goods, § 86. No drawback or bounty is allowed upon exportations unless the goods have been entered in the name of the real owner at the time of entry and shipping, or of the person who had actually purchased and shipped them, in his own name and at his own liability and risk, on commission, according to the practice of merchants, and who continues to be entitled in his own right to such drawback or bounty, except in the cases after provided for.

§ 87. The owner or commission merchant must subscribe a declaration upon the debenture that the goods have been actually exported, and have not been relanded, and are not intended to be relanded in any part of the United Kingdom nor in the Isle of Man (unless entered for the Isle of Man), nor in the Faroe Isles, and that he was the real owner at the time of entry and shipping, or that he had purchased and shipped the goods in his own name and at his own liability, on commission, as the case may be, and that he was and continued to be entitled to the drawback in his own right, provided that if he have not purchased the right to the drawback or bounty, he must declare under his hand upon the entry and the debenture the person entitled to it, whose name must be stated in the cocket and in the debenture, and the receipt of such person on the debenture is a discharge for the drawback.

§ 88. If the owner or merchant be resident more than 20 miles from the custom-house of the port of shipment, he may appoint any person to be his agent to make and pass his entry, and to clear and ship his goods, and to receive the drawback or bounty payable on his debenture, if payable to him, provided the name of the agent and the residence of the owner or merchant be subjoined to the name of the owner or merchant in the entry and in the cocket. The agent must make declaration upon the entry, if any be necessary, and also upon the debenture, to the effect above described, and must answer such questions touching his knowledge of the exportation of the goods, and the property therein, and of the right to the drawback or bounty, as may be demanded by the collector or comptroller; and if such goods be exported by a corporation or joint-stock company, they may appoint an agent so to act for them.

§ 89. If any goods to be exported for drawback have been consigned by the owner to his agent to be exported on account of the owner, the agent being the consignee by whom and in whose name the duties inwards on such goods had been paid, or his legal representative, may in like manner enter, clear, and ship the goods for him, and receive the drawback.

§ 90. No drawback is allowed on exportation of goods unless they be shipped within 3 years after payment of duties inwards, and no debenture for any drawback or bounty allowed upon exportation is paid after 2 years from the date of shipment, nor is any drawback allowed upon goods which by damage or decay have become of less value for home use than the drawback; and goods so damaged if cleared for drawback are forfeited, and the person clearing forfeits £200, or treble the drawback, at the election of the commissioners.

§ 91. For the purpose of computing and paying any drawback or bounty, a debenture must, in due time after entry, be prepared by the collector and comptroller, certifying in the first instance the entry outwards; and so soon as the goods have been duly exported, and a notice of the particulars of them has been delivered by the exporter to the searcher, the shipment and exportation must be certified to the collector and comptroller upon the debenture, by the searcher, and the debenture is then computed and passed with all convenient despatch, and delivered to the person entitled to receive it.

§ 92. No drawback or bounty is allowed for goods exported to the Isle of Man until a certificate be produced from the collector and comptroller there of the due landing.

§ 93. No drawback or bounty is allowed for bales cleared as press-packed, unless the quantities and qualities of goods in each be verified by the master packer, or, in case of unavoidable absence, by his foreman, having knowledge of the contents, by declaration subscribed upon the cocket before the collector or comptroller; or if the packer reside more than ten miles from the port, by declaration upon an account of the goods, before a magistrate or justice. If such bales be not cleared as being press-packed, the searcher, having opened any bale, is not required to repack it at his charge.

§ 94. No goods cleared for drawback or bounty, or from the warehouse, can be waterborne, to be put on board, unless by a person authorized by license from the commissioners, who, before granting it, may require such security as they may deem necessary. The commissioners may revoke any such license if the holder be convicted of any offence against the laws of the customs or excise.

§ 95. If any goods taken from the warehouse to be exported, or cleared to be exported for any drawback or bounty, are not duly exported to parts beyond the seas, or are relanded (not having been duly relanded or discharged as short-shipped under the care of the proper officers), or be landed in the Faroe Isles, or be carried to the Channel Islands, or Man (not having been duly entered, cleared, and shipped to be exported directly to one of these islands), they are forfeited, together with the ship, and all vessels used in relanding, landing, or carrying them; and any person by whom, or by whose orders or means, the goods have been so taken or cleared, or so relanded, landed, or carried, forfeits a sum equal to treble their value.

§ 96. A drawback of the whole duties is allowed for wine for officers of the navy, on board ships in actual service, not exceeding in one year the following quantities, viz.:—For every admiral, 1260 galls.; vice-admiral, 1050; rear-admiral, 840; captain of the first and second rate, 630; captain of the third, fourth, and fifth rate, 420; captain of an inferior rate, 210; lieutenant and other commanding-officer, and for every marine officer, 105. Such wine can only be shipped at one of the following ports, viz.:—London, Rochester, Deal, Dover, Portsmouth, Plymouth, Yarmouth, Falmouth, Belfast, Dublin, Cork, Leith, or Glasgow.

§ 97. The person entering such wine, and claiming the drawback, must state in the entry and declare on the debenture, the name of the officer, and of his ship; and the wine must be delivered into the charge of the officers of the customs at the port of shipment, to be secured and warehoused until shipped under their care; and the officers having certified upon it the receipt of the wine, the debenture is computed, passed, and delivered.

§ 98. Provision is made for transferring wine from one officer to another, as part of his proportion, whether on board the same ship or another, or the transshipment from one ship to another for the same officer, or the relanding and warehousing for future reshipment. The officers of customs may receive back the duties for any of such wine, and deliver it for home use: Provided, that if any such wine be not laden on board the ship for which it was intended, or be unladen without permission of the proper officer of the customs, it is forfeited.

§ 99. The purser of any ship of war in actual service may enter and ship at the ports of Rochester, Portsmouth, or Plymouth, tobacco there standing warehoused in his name, for the use of his ship, provided he deliver to the collector or comptroller a certificate from the captain, stating the name of the purser and the number of men, and give bond, with one surety, in treble the duties, that no part shall be relanded without leave of the officers of the customs, or be landed in the Channel Islands, or Man.

§ 100. If any purser be removed to another ship, the remainder of any tobacco may be transshipped, upon due entry, setting forth the time and the port of the first shipment. The collector and comptroller of a port where any ship is paid off may permit the remains of any tobacco to be landed, and entered by the purser, either for payment of duties, or to be warehoused for six months, for the supply of some other ship, or for payment of duties. All tobacco so warehoused is subject to the provisions of the act for the warehousing of tobacco generally, as far as applicable.

§ 101. No greater quantity of tobacco is allowed to any ship than 2 lbs., by the lunar month, for each of the crew, nor may a greater quantity be shipped at one time than sufficient to serve for six months; and the collector and comptroller have to transmit an account of the quantities to the commissioners.

§ 102. Goods may not be put off from any wharf, quay, &c., or be waterborne for exportation, except only on days not being Sundays or holidays, and in the daytime, viz.: from 1st September to the last day of March, betwixt sunrising and sunsetting, and from the last day of March until the 1st September, between 7 o'clock A. M. and 4 o'clock P. M.; nor may goods be then put off or waterborne, unless in the presence or with the authority of the proper officer, nor except from a legal quay appointed by royal authority, or some wharf, quay, or place appointed by the commissioners.

§ 103. Any person exporting goods prohibited from being exported under penalty of forfeiture, forfeits double their value.

Prohibitions, § 104. The goods in the table following are either absolutely prohibited to be exported, or must be exported under the restrictions in the table, viz.:—

A TABLE OF PROHIBITIONS AND RESTRICTIONS OUTWARDS.

Clocks and watches, viz.: Any outward or inward box, case, or dial-plate, of any metal, without the movement in or with every such box, case, or dial-plate, made up fit for use, with the clock or watchmaker's name engraven thereon.

Lace, viz.: Any metal inferior to silver which shall be spun, mixed, wrought, or set upon silk, or which shall be gilt, or drawn into wire, or flatted into plate, and spun or woven, or wrought into or upon, or mixed with lace, fringe, cord, embroidery, tambour-work, or buttons, made in the gold or silver lace manufactory, or set upon silk, or made into bullion spangles, or pearl or any other materials made in the gold or silver lace manufactory, or which shall imitate or be meant to imitate such lace, fringe, cord, embroidery, tambour-work, or buttons; nor shall any person export any copper, brass, or other metal which shall be silvered or drawn into wire, or flatted into plate, or made into bullion spangles, or pearl or any other materials used in the gold or silver lace manufactory, or in imitation of such lace, fringe, cord, embroidery, tambour-work, or buttons, or of any of the materials used in making the same, and which shall hold more or bear a greater proportion than three pennyweights of fine silver to the pound avoirdupois of such copper, brass, or other metals. Any metal inferior to silver, whether gilt, silvered, stained, or coloured, or otherwise, which shall be worked up or mixed with gold or silver in any manufacture of lace, fringe, cord, embroidery, tambour-work, or buttons.

Tools and utensils, viz.: Any machine, engine, tool, press, paper, utensil, or instrument used in or proper for the preparing, working, pressing, or finishing of the woollen, cotton, linen, or silk manufactures of this kingdom, or any other goods wherein wool, cotton, linen, or silk is used, or any part of such machines, engines, tools, presses, paper, utensils, or instruments, or any model or plan thereof, or any part thereof; except wool cards or stock cards not worth above four shillings per pair, and spinners' cards not worth above one shilling and sixpence per pair, used in the woollen manufactures. Blocks, plates, engines, tools, or utensils, commonly used in or proper for the preparing, working up, or finishing of the calico, cotton, muslin, or linen printing manufactures, or any part of such blocks, plates, engines, tools, or utensils. Rollers, either plain, grooved, or of any other form or denomination, of cast-iron, wrought iron, or steel, for the rolling of iron or any sort of metals, and frames, beds, pillars, screws, pinions, and each and every implement, tool, or utensil thereunto belonging; rollers, slitters, frames, beds, pillars, and screws for slitting mills; presses of all sorts, in iron and steel, or other metals, which are used with a screw exceeding one inch and a half in diameter, or any parts of these several articles, or any model of the before-mentioned utensils, or any part thereof; all sorts of utensils, engines, or machines used in the casting or boring of cannon or any sort of artillery, or any parts thereof, or any models of tools, utensils, engines, or machines used in such casting or boring, or any parts thereof; hand-stamps, dog-head stamps, pulley-stamps, hammers and anvils for stamps; presses of all sorts called cutting-out presses; beds or punches to be used therewith, either in parts or pieces, or fitted together; scouring or shading engines; presses for horn buttons; dies for horn buttons; rolled metal, with silver thereon; parts of buttons not fitted up into buttons, or in an unfinished state; engines for chasing, stocks for casting buckles, buttons, and rings; die-sinking tools of all sorts; engines for making button-shanks; laps of all sorts; tools for pinching of glass; engines for covering of whips; bars of metal covered with gold or silver, and burnishing stones commonly called blood-stones, either in the rough state or finished for use; wire moulds for making paper; wheels of metal, stone, or wood, for cutting, roughing, smoothing, polishing, or engraving glass; purcellas, pincers, sheers, and pipes used in blowing glass; potters' wheels and lathes, for plain, round, and engine-turning; tools used by saddlers, harness-makers, and bridle-makers, viz.: Candle strainers, side-strainers, point-strainers, creasing-irons, screw-creasers, wheel-irons, seat-irons, pricking-irons, bolstering-irons, clams, and head-knives. Frames for making wearing-apparel.

A List of Goods, the Exportation of which may be Prohibited by Proclamation or Order in Council.

Arms, ammunition, and gunpowder. Ashes, pot and pearl. Military stores and naval stores, and any articles (except copper) which her Majesty shall judge capable of being converted into or made useful in increasing the quantity of military or naval stores. Provisions, or any sort of victual which may be used as food by man.

Any goods exported, or waterborne to be exported, contrary to any of these prohibitions or restrictions, are forfeited.

COASTWISE.

§ 105. All trade by sea from one part of the United Kingdom to another, or from one part of the Isle of Man to another, is deemed coasting-trade, and all ships employed therein coasting-ships; and no part of the United Kingdom, however situated, is deemed beyond the seas, with regard to any other part.

§ 106. The Treasury are empowered to determine in what cases the trade by water from one place on the coast to another shall or shall not be deemed a trade by sea, within the meaning of this act or any other act.

§ 107. No goods are to be carried in any coasting-ship, except such as are laden at some place in the United Kingdom, or the Isle of Man; and no goods are to be laden to be carried coastwise until all goods brought in the ship from abroad have been unladen; and if any goods be taken into or put out of any coasting-ship at sea, or over the sea, or if any coasting-ship touch at any place over the sea, or deviate from her voyage, unless forced by unavoidable circumstances, or if the master of any coasting-ship which may touch at any place over the sea, do not declare the same in writing, under his hand, to the collector or comptroller at the port where the ship afterwards first arrives, the master forfeits £200.

§ 108. No goods are to be laden to be carried coastwise, nor having been brought coastwise to be unladen, until due notice in writing, signed by the master, have been given to the collector or comptroller, by the master, owner, wharfinger, or agent, of the intention to lade, or of the arrival, as the case may be, nor until proper documents have been granted, as after described, for the lading or unlading; and goods laden or unladen contrary to the directions of the act, as follows, are forfeited.

§ 109. In the notice must be stated the name and tonnage of the ship, the name of the port to which she belongs, the name of the master, the name of the port to which she is bound or from which she has arrived, and the name or description of the wharf or place at which her lading is to be taken in or discharged, as the case may be; the notice to be signed by the master, owner, wharfinger, or agent, and entered in a book to be kept by the collector, for the information of all interested. Every notice for unlading must be delivered within 24 hours after arrival, under a penalty of £20 by the master; and in every notice for lading must be stated the last voyage on which the vessel arrived; and if the voyage have been from beyond the seas, there must be produced with the notice a certificate of the discharge of any goods brought in the ship, and of due clearance inwards.

§ 110. Upon the arrival of any coasting-ship in Britain from Ireland, or in Ireland from Britain, the master must, within 24 hours, deliver the notice, signed by him, to the collector or comptroller, in which, if the ship have on board goods subject to any duty of Excise, or which had been imported from beyond the seas, the particulars, with the marks and numbers of the packages, must be set forth. If there be no such goods on board, it must be so declared. The master must answer any questions relating to the voyage, and if he fail in due time to deliver the notice, and truly to answer questions, he forfeits £100.

§ 111. When due notice has been given to the collector or comptroller at the port of lading of the intention to lade, he grants a general sufferance for the lading of goods (without specifying them), at the place therein expressed, which is authority for lading any goods, except such as it may expressly except. But before a sufferance be granted for goods prohibited, or subject to any export duty other than an *ad valorem* duty, the master or owner, or the shipper, must give bond, with one surety, in treble the value, that the goods shall be landed at the port for which the sufferance is required, or be otherwise accounted for to the satisfaction of the commissioners.

§ 112. The master of every coasting-ship must keep a cargo-book, stating the name of the ship, of the master, and of the port to which she belongs, and of the port to which bound on each voyage. In this book must be entered,—at the port of lading, an account of all goods taken on board, stating the descriptions of the packages, and the quantities and descriptions of the goods packed and loose, and the names of the shippers and consignees, as far as known,—and at the port of discharge must be noted the respective days on which goods are delivered, and the respective times of departure and arrival. The master must produce the book for the inspection of the coast-waiter or other proper officer, so often as demanded, who is at liberty to make any note or remark therein. If the master fail correctly to keep the book, or to produce the same, or if there be found on board goods not entered, or noted as delivered, or if any goods entered as laden, or not noted as delivered, be not on board, the master forfeits £50, and if, upon examination at the port of lading, any package entered as containing foreign goods be found not to contain such, it is forfeited, with its contents; and if at the port of discharge any package be found to contain foreign goods not entered, they are forfeited.

§ 113. Before any coasting-ship departs, an account, with a duplicate, fairly written, and signed by the master, must be delivered to the collector or comptroller, setting forth the particulars required to be entered in the cargo-book, of foreign goods, and goods subject to export duty (other than an *ad valorem* duty), and of corn, grain, meal, flour, or malt, laden on board, and generally, whether any other British goods or no other British goods be laden, or whether the ship be wholly laden with British goods not of any of the descriptions before mentioned, as the case may be. The collector or comptroller retains one of the accounts, and returns the other, dated and signed by him, and noting the clearance thereon; and the account is the clearance for the voyage, and the transire for the goods. If it be false, or do not correspond with the cargo-book, the master forfeits £50.

§ 114. Before goods are unladen at the port of discharge, the master, owner, wharfinger, or agent, must deliver the transire to the collector or comptroller, who grants an order for the unlading at a place specified. If any goods on board be subject to duty on arrival coastwise, the master, owner, wharfinger, agent, or consignee, must also deliver a bill of entry, with a copy, and must pay all duties of customs, or produce a permit in respect of duties of excise, upon which the collector and comptroller grant an order for the landing, in presence or by authority of the coast-waiter.

§ 115. The collector and comptroller, in the cases after mentioned, may grant for any coasting-ship a general transire, to continue for any time not exceeding one year, for the lading of any goods (except such as it may expressly except), and for the clearance and unlading, viz.:—For any ship regularly trading,—between places in the river Severn eastward of the Holmes; or between places in the river Humber; or between places in the Firth of Forth; or between places to be named in the transire, and carrying only manure, lime, chalk, stone, gravel, sand, or any earth, not being fullers' earth. The transire must be written in the cargo book. It may at any time be revoked, notice being given to the master or owner, or to any of the crew on board, or being entered in the cargo book by an officer. [By 6 & 7 Wm. IV. c. 60, § 6, this provision is extended, and such transires may be granted by the commissioners, "under such regulations, and for such time as they may see fit."]

§ 116. The coast-waiter, landing-waiter, and searcher, and any other officer, may, at any time board any coasting-ship, and strictly search her, and examine all goods on board, or being laden or unladen, and demand all documents which ought to be on board.

§ 117. No goods going coastwise are to be unshipped, shipped, or waterborne to be shipped, but on the days and within the times before mentioned in § 102, and in presence or with the authority of, and at places appointed and approved of by, the proper officer.

§ 118. When goods are prohibited to be exported by proclamation or order in council, the proclamation or order may prohibit or restrict the carrying of them coastwise; and when such prohibition or restriction is invaded, the goods are forfeited.

MISCELLANEOUS REGULATIONS.

§ 119 Provides for the construction of abbreviated terms,—among these, the term "Limits of the East India Company's charter" means all places and seas eastward of the Cape of Good Hope to the Straits of Magellan; the terms "collector and comptroller" mean those of the port intended in the sentence; the term "warehouse" means any place, whether house, shed, yard, timber-pond, or other place in which goods entered to be warehoused upon importation may be kept, and secured without payment of duty, or although prohibited to be used in the United Kingdom; and the term "queen's warehouse" means any place provided by the crown for lodging goods therein for security of the customs.

§ 120. The island of Malta and its dependencies are deemed in Europe.

§ 121. Duties, bounties, and drawbacks must be paid and received in British currency, and according to imperial weights and measures; and where they are imposed and allowed according to any specific quantity or value, they apply in the same proportion to any greater or less quantity or value; and all duties, bounties, and drawbacks are under the management of the commissioners of the customs.

§ 122. All bonds in respect of goods or ships are taken by the collector and comptroller; and after expiration of 3 years from the date, or from the time for performance, every bond upon which no prosecution or suit has been commenced is void.

§ 123. The same instruments, tables, and scales of graduation, and the same rules and methods, followed by the officers of excise, are to be employed by the officers of the customs for the duties on imported spirits.

§ 124. The officers of the customs may take samples of goods for ascertaining the duties, to be disposed of as the commissioners may direct.

§ 125. For adapting alterations in the law to current transactions, it is provided that importation is deemed to have had effect at the time at which the ship had actually come within the limits of the port of reporting and discharging, and that exportation is deemed to have had effect at the time at which the goods had been shipped for exportation; and if such question arise upon the arrival or departure of any ship, exclusive of her cargo, the time of arrival is deemed that at which the report has been or ought to have been made; and the time of departure is deemed that of the last clearance for the voyage.

§ 126. It is not lawful to return any overcharge or duty, which has been judicially decided to be levied on an erroneous construction of the law, after the expiration of three years from the date of payment.

§ 127. The tonnage or burden of every British ship within the meaning of the act, is that set forth in the certificate of registry, and the tonnage or burden of every other ship must be ascertained in the same manner as those of British ships.

§ 128. The officers at any port under British dominion where there is a collector and comptroller may refuse to admit any person to act as master of any British ship, unless his name be inserted in or indorsed upon the certificate of registry as master, or until his name be so indorsed by such collector and comptroller.

§ 129. Persons falsifying, or counterfeiting, or using, when falsified or counterfeited, documents for the unlading, lading, entering, reporting, or clearing of ships, or the landing or shipping of goods, &c., or by any false statement procuring such document, forfeit £200; but the penalty does not attach to any particular offence for which any other penalty is expressly imposed.

§ 130. When any person makes application to an officer on behalf of any other person, the officer may require of the person applying a written authority from the person for whom he acts before transacting business.

§ 131. Any person making a false declaration, except as to the value of goods, and any person not truly answering questions authorized by any customs act, forfeits £100, over and above any other penalty.

§ 132. All articles by this or any other customs act declared to be forfeited, may be seized by any officer of the customs; forfeitures of vessels include the guns, tackle, apparel, and furniture; forfeitures of goods include the packages.

§ 133. Articles forfeited, or detained as undervalued, may be restored on such terms as the commissioners may think fit; and if the proprietor accept the terms, he can have no action for recompense or damage.

§ 134. If a ship have become liable to forfeiture, or the master to any penalty on account of goods laden or unladen, which are small in quantity or of trifling value, and it appear to the satisfaction of the commissioners, that they had been laden or unladen contrary to the intention of the owners, or without the privity of the master, as the case may be, the commissioners may remit the forfeiture, and remit or mitigate the penalty, as they shall see reason to acquit the master of all blame, or more or less to attribute the offence to neglect of duty.

§ 135. If any ship coming up or departing out of port do not bring to at the stations appointed by the commissioners, for the boarding or landing of officers, the master forfeits £100.

§ 136. The commissioners, and the collector and comptroller of any port, may station officers on board any ship while within port, the master providing each with sufficient room under the deck, in some part of the forecastle or steerage, for his bed, and in case of neglect or refusal, forfeiting £100.

§ 137. When goods are warehoused for security of the duties, or to prevent them from coming into home use, the commissioners may charge warehouse rent for the time, at the rate payable for the like goods when warehoused in any warehouse in which they may be warehoused without payment of duty; but the Commissioners of the Treasury, or of the Customs, by warrant under their hands from time to time may fix the amount of rent for goods secured in any of the warehouses.

§ 138. In case goods are not cleared from the warehouse within 3 calendar months (or sooner, if they be of a perishable nature), the commissioners may cause them to be sold by auction, for home use or exportation, as the case may be, the produce to be applied towards the payment of the duties, if sold for home use, and of the warehouse rent and other charges, and the overplus (if any) being paid to the person authorized to receive the same. They may cause such goods to be destroyed as cannot be sold for a sum sufficient to pay duties and charges, if sold for home use, or to pay charges, if for exportation: Provided that if the goods have been landed by the officers, and the freight of the same has not been paid, the produce must be first applied to the payment of freight.

§ 139. The crown is empowered by commission out of the Exchequer, from time to time to appoint any port, haven, or creek, and to set out the limits thereof, and to appoint the proper places therein to be legal quays for lading and unlading, and to declare that any place set out as a legal quay by such authority, shall be no longer such, and to appoint any new place to be a legal quay. All ports, &c. existing as legal at the commencement of the act continue to be so, according to their respective limits, &c.

§ 140. In proceedings for offences, the averment that they were committed within the limits of any port is sufficient, without proof of the limits, unless the contrary be proved.

§ 141. The commissioners may from time to time, by order under their hands, appoint places to be sufferance wharfs, for lading and unlading by sufferance.

§ 142. No vessel employed ordinarily for the carriage of letters is permitted to import or export without permission of the commissioners, under penalty of £100 against the master.

§ 143. No person is to be deemed an apprentice in terms of the act 4 Geo. IV. c. 25, *for regulating the number of apprentices to be taken on board* British *merchant vessels, &c.*, unless the indenture have been enrolled with the collector and comptroller of the port from which the apprentice first goes to sea after the date of the indenture, or in default of such enrolment, until it have been enrolled at some port from which the ship in which such apprentice shall afterwards go to sea shall be cleared. [See the Abridgment of the Seaman's Consolidation Act, 5 & 6 Wm. IV. c. 19. SEAMEN.]

Licensed Agents, § 144. No one is entitled to act as an agent for transacting business at the Custom-house in London, relating to the entry or clearance of any ship, goods or baggage, unless authorized by license of the commissioners, who are empowered in such case to require bond to be given, with one surety, in the sum of £1000, for the faithful and incorrupt conduct of such person and his clerks, provided that such bond be not required of any of the sworn brokers of the city of London; and any person acting without license, or in partnership with any person not licensed, forfeits £100 for each offence. [Bonds which had been granted in terms of 6 Geo. IV. c. 107 (repealed), are valid by 1 & 2 Vict. c. 113, § 8.]

§ 145. The Commissioners of the Treasury may, by order under their hands, revoke such license, and after a copy of such order has been delivered to the person or his clerk, or left at his place of abode or business, the license is void.

§ 146. These provisions do not prevent the clerk or servant of any person, or of any persons in copartnership, from transacting business at the Custom-house on account of such person without license; provided he do not transact any such business as clerk, servant, or agent to any other person.

§ 147. Any such agent or agents in copartnership may appoint any person without license to be a clerk in transacting such agency: Provided that no person can be admitted to be clerk to more than one agent or copartnership, nor until his name and residence, and the date of his appointment, have been indorsed on the agent's license, and signed by him, and witnessed by the signature of the collector and comptroller, unless such person have been appointed with consent of the commissioners before the commencement of the act.

§ 148. The Commissioners of the Treasury, by warrant, published in the London or Dublin Gazette, may extend these regulations to agents at any other port in Britain or Ireland.

[For abridgments of the other acts connected with the customs and the regulation of navigation, see SHIPPING, SMUGGLING, TARIFF, WAREHOUSING.]

CUTLERY. [HARDWARE AND CUTLERY.]

CUTTER, a sharp, light-built vessel, with one mast, running bowsprit, and fore and aft sails. Cutters are chiefly used as cruisers after smugglers, for conveying despatches to a fleet, and for private sailing yachts.

CUTTLE-FISH, a molluscous class of animals (*Cephalopoda*) of which seven species are indigenous to our seas, the most common being the *Sepia officinalis*, found in profusion on the shores of Hampshire, and other parts. The cuttle-fish is celebrated for the effusion, from a small bag, of a deep black fluid, by which, in exigencies, it clouds the surrounding water, in order that it may conceal itself. This excretion is manufactured into the pigment called sepia, and it is believed by many that China-ink is made from it. The internal plate or bone, being hard on one side while it is soft and yielding on the other, is sometimes used as a mould; it is also employed for cleaning or polishing silver; and when ground it furnishes "pounce," a material used by scribes for erasures.

CYPRESS, a forest tree, the most important species of which are the evergreen cypress (*Cupressus sempervirens*) and the white cedar (*C. thyoides*). Of the former there are two varieties, the upright and the spreading,—the last affording the larger and more valuable timber. It is a native of the south-eastern parts of Europe, particularly of Italy, where it is beautifully applied in the terraced scenery of villas; but it is not much cultivated in England,—the climate being too damp and cold for it in summer. Its wood is hard, elastic, and, though not so beautiful in colour as mahogany, it is stronger, resists the worm equally well, and its odour repels insects from whatever may be contained in a cabinet or chest made of it. In order to preserve the remains of their heroes, the Athenians buried them in coffins of cypress; and the chests in which the Egyptian mummies are found are usually of the same material. The precise period to which the tree lives has not been ascertained, though the fact of its being planted over the graves of the dead, and carried in funeral processions as an emblem of immortality, may be regarded as a presumption that its duration must be very considerable.

The American cypress or white cedar is a native of Mexico and of the southern parts of North America,—luxuriating in the deadly swamps of the Mississippi. It grows to a considerable size, but slowly, being eighty years old before it is fit for timber, which even then is not very valuable, though it answers well for hoops, boats, roofing, and some other purposes.

D.

DAMAGED GOODS are those subject to customs duties though they have received some injury in their conveyance into the country, or in the bonded warehouse.

Not more than 63-64th parts to be allowed on damaged goods. (*Board Order*, May 31, 1771.)

At the out-ports, damages exceeding £10 not to be allowed without the Board's sanction, and not after the goods are in the merchant's possession. (*B. O.* Jan. 4, 1817.)

Surveys for damage not to take place until the parties have first petitioned. (*B. O.* June 5, 1817.)

The chief other rules are contained in the act 3 & 4 Wm. IV. c. 52, § 30-32, an abstract of which is given under the head Customs Regulations.

DAMASK (Fr. *Venise*. Ger. *Damasten Tafelzeug*. It. *Tela damaschina*. Por. *Guarnicao de mesa adamascada*. Sp. *Tela adamascada*), a description of silk or linen cloth, of thick texture but fine in quality, with elaborate figures or flowers. It is a twilled fabric, and said to have been first made in Damascus. Linen damask is at present manufactured extensively at Dunfermline in Scotland, and in Ireland, for tablecloths and napkins. That made for curtains and similar articles, is formed of a mixture of silk with linen, cotton, or woollen. [Linen.]

DAMMER, a resinous substance much employed in India for covering the bottoms of vessels. It is hard, dark-coloured, and brittle; and is exported in large quantities from the Eastern Islands and Malayan Peninsula to India. It exudes spontaneously from a tree, said by Mr Milburn to be a species of pine (*Shorea robusta*, Rox.); but according to Mr Crawfurd it is obtained of various kinds from different trees. It is so plentiful that it is gathered in lumps from the ground where it has fallen.

DANTZIC. [Prussia.]

DATE (Fr. *Dattes*. It. *Datteri*. Sp. *Datiles*), the fruit of the date palm (*Phœnix dactylifera*), a tree which forms the chief object of cultivation along the verge of the desert, which, with but few interruptions, extends from the shores of the Atlantic to the confines of Persia, a district where none of the cerealia will grow, owing to the aridity of the soil and the want of moisture. Between the States of Barbary and the Desert, it is so abundant that this region is called *Belid-ul-gerid*, or the Land of Dates. There are upwards of a hundred varieties; but in general it may be described as acorn-shaped, composed of a thin glossy membrane which contains a fine soft and pulpy fruit that is firm, sweet, and rather vinous to the taste; within this is enclosed a solid, tough, hard kernel. Ripe dates cannot be kept for any length of time without fermenting and becoming acid; whence those which are intended for storing or exportation are dried in the sun upon mats. They are exported in large quantities from Arabia to India; and a few are brought to this country from the Levant and Barbary.

"In the Hedjaz, the new fruit called *ruteb* comes in at the end of June, and lasts two months. The harvest of dates is expected with as much anxiety, and attended with as general rejoicing, as the vintage of the South of Europe. The crop sometimes fails, or is destroyed by locusts, and then a universal gloom overspreads the population. The people do not depend upon the new fruit alone, but during the ten months of the year when no ripe dates can be procured, their principal subsistence is the date paste, called *adjoue*, which is prepared by pressing the fruit, when fully matured, into large baskets. 'What is the price of dates at Mecca or Medina?' is, says Burckhardt, always the first question asked by a Bedouin who meets a passenger on the road." (*Lib. of Ent. Knowledge*, *Veget. Substances*, vol. i. p. 357.)

The Date Palm is a majestic tree which shoots up in one cylindrical column to the height of 50 or 60 feet, without branch or division, and throws out from the summit a magnificent crown of leaves. It is distinguished as male and female, one plant bearing the fruit and another the blossom. In the East, it has always been the subject of universal veneration. It is the palm-tree of Scripture, where it is frequently selected as the emblem of the majesty and beauty of rectitude; and both in ancient and modern times, the leaves have been used as the symbol of triumph. Its extensive importance is one of the most curious subjects in natural history; for a considerable part of the inhabitants of Egypt, Arabia, and Persia, subsist almost entirely upon its fruit. They boast also of its medicinal virtues. Their camels feed upon the date stones; from the leaves they make couches, baskets, bags, mats, and brushes; from the branches, cages for their poultry, and fences for their gardens; from the fibres of the boughs, thread, ropes, and rigging; from the sap is prepared a spirituous liquor; and the trunk of the tree furnishes fuel. It is now said, that from one variety of palm-tree meal has been extracted from among the fibres of the trunk, and has been used for food.

DAY-BOOK. [Book-keeping.]

DAYS OF GRACE, a certain number of days granted to the acceptor after the term of a bill is expired. In the British dominions these amount to three; but if the third should be Sunday, Good-Friday, Christmas-Day, or a fast appointed by proclamation, the bill is payable on the second day of grace. They run on all bills payable on a day fixed, or at so long after date, or after sight; but not on bills payable on demand, though they do (at least in England) on those payable at sight.

DEAD-WEIGHT, the name given to an advance by the Bank of England to government, on account of the half-pay and pensions of retired officers of the army and navy. After the end of the war, the sums thus payable amounted to about £5,000,000 per annum; and the ministry being desirous to relieve their present necessities by spreading the burden more equally over the 45 years, which, in 1822, were calculated as the mean probable duration of the lives, offered (4 Geo. IV. c. 22) to pay to any capitalists an annuity of £2,800,000 for that period, on condition of provision being made for the pensions on the basis of a graduated scale of payments; commencing in the first year at £4,900,000, and ending at £300,000. The South Sea directors entertained the project for a time, but soon discovered that it was beyond their means; ministers had then recourse to the Bank of England, who, in 1823, accepted the offer to a limited extent, and advanced to government, in the course of five years, £13,089,419, receiving in return an engagement to pay an annuity of £585,740 for 44 years, ending October 10, 1867. The bank has not yet disposed of any part of this security: a portion of it was, however, exposed for sale on the 17th July 1839; and an account of the offers then received will be found in the late Report on Banks of Issue. (*Par. Paper*, 1840, No. 602. App. p. 263.)

DEALS (Dan. *Dæler*. Du. *Deelen*. Fr. *Planches minces*. Ger. *Dielen*. Rus. *Doski*. Sw. *Tiljor*), the name given in the wood-trade to the timber of the pine when sawed into planks, in which form it is imported into this country from the N. of Europe and British America. Standard deals are boards above 7 inches in width, and of various lengths, exceeding 6 feet. When less than 7 inches in width they are termed *battens*, and when under 6 feet in length, *deal-ends*. The American deals are inferior in strength, and do not last so long as those of the N. of Europe, particularly Christiania; hence the latter are usually preferred for the flooring of houses, and other purposes where durability is required. But the former are used where cheapness is the principal consideration, as in building small houses; they are also preferred for many little articles, the internal fittings of houses, and other purposes which require wood that can be easily worked.

DEBENTURE, the certificate given at the customhouse to the exporter of goods, on which a bounty or drawback is allowed, bearing that he has complied with the statutory regulations, and is entitled to such bounty or drawback. [Customs Regulations.]

DECIMAL FRACTIONS differ from vulgar fractions in this respect, that their denominators are always 10, or some power of 10, as 100, 1000, &c., and instead of *writing* the denominator under the numerator, it is *expressed* by pointing off from the right of the numerator as many figures as there are ciphers in the denominator; thus ·5, ·43, 5·26 denote, respectively, $\frac{5}{10}$, $\frac{43}{100}$, $5\frac{26}{100}$, or $\frac{526}{100}$. The value of each figure in a decimal decreases from the left to the right in a tenfold proportion; that is, each figure is ten times as great as if it were removed one place to the right, as in whole numbers; thus, ·5, ·05, ·005, are $\frac{5}{10}$, $\frac{5}{100}$, $\frac{5}{1000}$, &c., and the decimal ·438 is four-tenths, three-hundredths, and eight-thousandths of a unit.

Adding ciphers to the right of a decimal does not alter its value; thus, ·5, ·50, ·500, or $\frac{5}{10}$, $\frac{50}{100}$, $\frac{500}{1000}$, are equal to each other, the numerator and denominator having been multiplied by the same number.

Decimals may be reduced to a common denominator by adding ciphers to the right, where it is necessary, till the number of decimal places is the same in all.

Thus, ·5, ·03, and ·564, reduced to a common denominator, are ·500, ·030, and ·564; that is, $\frac{500}{1000}$, $\frac{030}{1000}$, and $\frac{564}{1000}$.

The consequence of this method of expressing fractions is, that addition, subtraction, multiplication, and division, are performed exactly as in common arithmetic; the only difference being, that we have, besides, to ascertain the place of the decimal point. In addition and subtraction, having placed the decimal points under one another, and filled up the decimals, or supposed them to be filled up, all to the same number of figures or places with ciphers, the *same number* of decimal figures or places must be made in the result as in each of the lines. In multiplication, the number of decimal places in the result must be the *sum* of those in the multiplier and multiplicand; and, in division, it must be the *difference* of those in the divisor and dividend. Thus, the sum, difference, product, and quotient of 8·085 and 1·96, is 10·045, 6·125, 15·84660, and 4·1, respectively.

Addition.	Subtraction.	Multiplication.	Division.
8·085	8·085	8·085	
1·96	1·96	1·96	
Sum 10·045	Difference 6·125	Product 15·84660	$\frac{8·085}{1·96}$ = 4·1 Quotient

To reduce a vulgar fraction to a decimal, add ciphers at pleasure, as decimals in the numerator, and divide by the denominator, according to the rule for the division of decimals.

Example $\frac{3}{4} = \frac{3·00}{4} = ·75.$

From the very nature of numbers, it must frequently happen that this division may be continued without termination; but, as the figures always decrease a tenth in value by each remove to the *right* from the point, decimals may be stopped, except in long calculations, at three or four places, without any great degree of error; and even in continued multiplications, when the decimals are stopped at a given place, we have only to increase the last figure by 1, if the next figure was to be 5 or above it, in order to compensate for cutting them short.

To find the value of a decimal of one denomination, in terms of a lower denomination.

Multiply the decimal by the number of integers of the lower denomination contained in one integer of the higher, and the product is the value required. The value of any fractional part of the lower denomination may be obtained in the same manner, till we come to the lowest.

Example, Required the value of ·66875 £

20

13·37500 shillings

12

4·500 pence

4

2·0 farthings

Hence, the value required is 13s. 4½d.*

To reduce a quantity to a decimal of a superior denomination.

Divide the quantity by the number of integers of its denomination contained in 1 of the superior denomination, and the quotient is the decimal required.

Example, What decimal of a pound is 13s. 4½d.?

4)2·

12)4·5

20)13·375

·66875

First, we find what decimal of a penny ½d. is; this by the rule is ·5; then what decimal of a shilling 4½d. or 4·5d. is; this is found in the same manner to be ·375; lastly, we find, by the same rule, what decimal of a pound 13·375 shillings is, which appears to be ·66875.

The proofs of the rules for the management of decimal fractions here given are necessarily confined to particular instances, but the same reasoning may be applied in every case.

The following table of equations between vulgar and decimal fractions will be found useful in practice:—

TABLE OF DECIMAL EQUIVALENTS.

1/60	·0167	2/15	·1333	4/15	·2667	23/60	·3833	31/60	·5167	19/30	·6333	23/30	·7667	53/60	·8833
1/48	·0208	7/48	·1458	13/48	·2708	19/48	·3958	25/48	·5208	31/48	·6458	37/48	·7708	43/48	·8958
1/40	·0250	3/20	·1500	11/40	·2750	2/5	·4000	21/40	·5250	13/20	·6500	31/40	·7750	9/10	·9000
1/32	·0312	5/32	·1562	9/32	·2812	13/32	·4062	17/32	·5312	21/32	·6562	25/32	·7812	29/32	·9062
1/30	·0333	1/6	·1667	17/60	·2833	5/12	·4167	8/15	·5333	2/3	·6667	47/60	·7833	11/12	·9167
1/24	·0417	7/40	·1750	7/24	·2917	17/40	·4250	13/24	·5417	27/40	·6750	19/24	·7917	37/40	·9250
1/20	·0500	11/60	·1833	3/10	·3000	13/30	·4333	11/20	·5500	41/60	·6833	4/5	·8000	14/15	·9333
1/16	·0625	3/16	·1875	5/16	·3125	7/16	·4375	9/16	·5625	11/16	·6875	13/16	·8125	15/16	·9375
1/15	·0667	1/5	·2000	19/60	·3167	9/20	·4500	17/30	·5667	7/10	·7000	49/60	·8167	19/20	·9500
3/40	·0750	5/24	·2083	13/40	·3250	11/24	·4583	23/40	·5750	17/24	·7083	33/40	·8250	23/24	·9583
1/12	·0833	13/60	·2167	1/3	·3333	7/15	·4667	7/12	·5833	43/60	·7167	5/6	·8333	29/30	·9667
3/32	·0937	7/32	·2187	11/32	·3437	15/32	·4687	19/32	·5937	23/32	·7187	27/32	·8437	31/32	·9687
1/10	·1000	9/40	·2250	7/20	·3500	19/40	·4750	3/5	·6000	29/40	·7250	17/20	·8500	39/40	·9750
5/48	·1042	11/48	·2292	17/48	·3542	23/48	·4792	29/48	·6042	35/48	·7292	41/48	·8542	47/48	·9792
7/60	·1167	7/30	·2333	11/30	·3667	29/60	·4833	37/60	·6167	11/15	·7333	13/15	·8667	59/60	·9833
1/8	·1250	1/4	·2500	3/8	·3750	1/2	·5000	5/8	·6250	3/4	·7500	7/8	·8750	60/60	1·

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* The following rule to convert decimals of a pound into shillings and pence will be found more convenient in practice:—

Double the first decimal on the right of the point for shillings, increasing this number by 1, if the second decimal be 5, or above it.

Consider the number expressed by the 2d and 3d decimals (deducting 50, if 1 was added to the shillings) as farthings; diminishing, however, this number by 1, if it be above 12, and less than 37; and by 2, if it be above 36. The other decimals may be neglected.

DEL CREDERE, in its restricted sense, is an engagement by an insurance broker, for an additional premium, to guarantee the insured against the consequences of the failure of the underwriter. In its ordinary mercantile acceptation, it embraces every commercial transaction, in which the person who transacts for another engages for the solvency of the person with whom he so bargains. A factor employed to dispose of property, in the usual manner, is only responsible to his principal for the consequence of neglecting that degree of care which a prudent man takes of his own affairs; and if he sell to a person in good credit, and that person fail, he is not responsible for the debt. If the factor or agent, however, hold a *del credere* commission, he engages, in consideration of an additional premium, to guarantee all his transactions. His responsibility extends to the absolute payment, and so it is not sufficient that he remit the price by bills to his principal, —he is responsible for their being honoured (M'Kenzie and Lindsay *v.* Scott, 6 *Brown's Par. Cases*, 280). It was formerly held that this was a contract in which the agent "engages to ensure to his principal not only the solvency of the debtor, but the punctual discharge of the debt," and that "he is liable in the first instance without any previous demand from the debtor" (*Paley on Principal and Agent*, 41; and see, in Scotland, *Bell's Com.* i. 378). But the later doctrine is, that "a factor or broker acting under a commission *del credere* is a *surety* to his principal for the solvency of those with whom the principal deals through his agency. He is in no case, as regards his own employer, himself the principal in any contract he may make for him, and is liable only in default of those with whom he deals. It follows, therefore, that before he can be charged, it must be averred in the declaration, and proved at the trial, that the principal debtor has made default." (*Note to Lloyd's Paley*, p. 111.) [FACTOR. PRINCIPAL AND AGENT.]

DELFT, a kind of earthenware, covered with an enamel or white glazing, which gives it the appearance and neatness of porcelain. It was so called from the town of that name in South Holland, the original seat of the manufacture, but which, since the improvements introduced into the English potteries by Wedgewood, is no longer a place of any note.

DELIVERY. [SALE. STOPPAGE IN TRANSITU.]

DEMERARA. [GUIANA.]

DEMURRAGE is applied to designate the time during which a vessel is detained beyond that originally stipulated in loading or unloading; but it is more commonly applied to the compensation which the freighter has to pay for such detention. The freighter usually agrees to load and unload within a certain time, and comes under a subsidiary stipulation to pay so much by way of demurrage if the time be exceeded, in which case it is generally fixed at a certain rate per day. In computing the number of days to be paid for, it may be a question whether they should be computed "running," *i. e.* without the exception of Sundays and holidays, or whether these should be excluded and "working" days only counted. It would appear that the interpretation of the word "days," in this respect, will depend on the custom of the place; and so it was decided, on evidence of custom, that when a vessel was employed on a voyage from the Elbe to London, with reference to unloading in the Thames, working days only were included (Cochran *v.* Retberg, 3 *Esp.* 121). Sometimes the demurrage is to run while the ship is detained by certain circumstances, *e. g.* while she is waiting for convoy, or until her cargo be completed. In the former case the demurrage ceases when the convoy is ready to depart, and in the latter when the ship is fully laden; and will not be continued by the vessel being detained, nor renewed on her being driven back by stress of weather. When there is a stipulation for demurrage, it is payable though the delay be not attributable to the conduct of the freighter, but to the crowded state of the docks, or to other extraneous causes. Demurrage is, properly speaking, the result of a stipulation, but it is often applied to the damages or compensation which the freighter must pay for having detained the vessel, when there is no special agreement, or beyond the time sanctioned by such agreement. The amount of damage in either of these cases must depend upon circumstance and usage; but in the latter case there is generally a means of measuring the amount, by that of the stipulated demurrage. Where a bill of lading has a note on the margin importing that the goods are to be removed at a certain time, otherwise a certain sum per diem is to be charged for delay, whoever claims the goods under the bill becomes responsible for the sum. It was decided in Evans *v.* Forster, however (1 *Barn. & Adol.* 118), that where there is no such note, the master cannot claim damages from the consignee on the implied contract. (*Abbot on Shipping*, 178-188.) [AFFREIGHTMENT. BILL OF LADING. CHARTER-PARTY. SHIPPING.]

DENARIUS, the chief silver coin in Rome down to the time of Constantine I., and worth, according to Pinkerton, about eightpence of our money. It originally contained ten asses, but after the first Punic war it became the representative of sixteen asses. The word denarius was also applied to coins of copper and gold. The *denarii æris* began with the Emperor Valerian, and six of them are supposed to have been equivalent to the silver denarius. The *denarius aureus*, the ordinary Roman coin of gold, was equivalent to twenty-five silver denarii, or a hundred sestertii.

DENMARK, a kingdom lying in the N. W. of Europe, between 53° and 58° N. and 18° and 13° E. Area, 21,472 square miles. Subdivisions and population:—1. Islands of Zealand, Funen, and others, 697,900; 2. North Jutland, 525,900; 3. South Jutland, or Duchy of Sleswick, 340,500; 4. Duchy of Holstein, 439,900; 5. Duchy of Lauenburg, 35,900; total, 2,040,100. Copenhagen, the capital, is situated in Zealand. The government is a hereditary monarchy, formerly absolute; but in 1834 representative assemblies, with a consulting voice, were instituted in each of the four principal divisions; the small duchy of Lauenburg having long possessed a diet of its own. As Duke of Holstein and Lauenburg, the king is a member of the Germanic confederation.

The aspect of Denmark, generally, is that of a rich, well-cultivated country. The surface is flat, covered in some places with sands and marshes; and forming, with the exception of Holland, the lowest part of the great plain of Northern Germany. There are no mountains, for the highest inequalities of soil in Holstein and Sleswick do not exceed 1000 feet; and the islands in many places scarcely rise above the level of the sea. From its proximity to the ocean, the climate of Denmark is warmer than its latitude indicates. At Copenhagen the mean temperature of the year is 45·68; that of the warmest month being 65·66; and of the coldest, 27·14. The structure of the land, no part of which is more than 40 miles distant from the coast, does not allow the formation of large rivers. Those navigable are the Eyder, which rises in Holstein, and falls into the North Sea at Tonningen, and the Trave, which enters the Baltic at Lubec. The former is navigable for about 105 miles, the latter for about 65. The want of such rivers is, however, amply compensated by the numerous *fiords* or firths, which indent the coasts. There are four canals. The largest is the Sleswick-Holstein, or Eyder canal, which conveys the Eyder from Rendsburg to the Gulf of Kiel, and thus unites the North Sea with the Baltic. It is 10 feet deep, and about 27 miles in length, and carries vessels of 120 tons. In 1838, no fewer than 2442 passed this canal, of which, however, only 11 were British. The Steckinitz canal connects the Elbe with the Gulf of Lubec; the others are the Daneskiold in Zealand, and the Odensee in Funen.

Denmark possesses no mines, and scarcely any mineral substances of importance; but agriculture has undergone greater improvements of late years than perhaps any other branch of national industry. The soil is chiefly composed of sand and clay, and the constant humidity of the atmosphere is favourable to vegetation. The pasturages are fresh and luxuriant, and the rearing of stock, particularly horses, is carried on extensively. All kinds of grain common to the latitude of the country, as oats, barley, rye, wheat, and other varieties, are found to succeed. Tobacco, flax, hemp. and hops are cultivated in some districts, and in the gardens, apples, pears, cherries, and hazel-nuts; great quantities of which are exported to Russia. Of the once extensive forests but few remains are now found, and those mostly in Lauenburg, consisting principally of oaks and beeches. To supply the deficiency of firewood, the people make use of turf and seaweed. The fisheries are of considerable importance. Of these the principal is the herring fishery, which is prosecuted on a large scale on the N. E. coast of Jutland, and on the fishing grounds of the Liimfiord. The Danes are also actively engaged in the cod fishery of the North Sea, and the Greenland whale fishery.

The government has afforded great encouragement to manufactures; but in no department (except under the protection of exorbitant duties) can the people compete even in their own markets with foreign rivals. The peasants employ themselves in working up their flax and wool into coarse cloths. In Copenhagen there are factories for silk and cotton weaving, constructed on similar principles with those of England; Randers and Odensee are famous for their tanneries and gloves; Tonder for its lace; Frederickswark, Elsineur, and Holbeck for manufacturing large and small firearms. Lauenburg contains soap-works, breweries, and potteries for common Dutch ware; Altona carries on different mannfactures; Oldeslohe, on the river Trave, is distinguished for its salt-works. Flensborg, a flourishing town, besides manufactories of soap and tobacco, has a considerable number of oil-mills and sugar-refineries.

The commerce of Denmark is inconsiderable, though, from being the key of the Baltic, it possesses peculiar advantages for a ready intercourse with most of the maritime states of Europe. This arises partly from the antiquated manner in which much of the business of the country is conducted, partly from high transit dues, but chiefly from the oppressive imposts which are levied with the view of sustaining the home manufactures. Much attention is, however, bestowed on navigation, and from the economical manner in which it is conducted, the Danes possess a considerable share of the carrying trade of other nations. At present the number of their ships is estimated at upwards of 3700, in burden 143,800 tons.

The exports consist almost wholly of the raw produce of the kingdom and its dependencies. In 1831, their amount was £1,295,011; in 1834, £1,656,771; and in 1836, it was £1,959,116 The chief articles were butter, 66,665 barrels, value £395,052; rapeseed, 93,932 quarters, value £230,368; barley, 224,721 quarters; oats, 86,312 quarters; rye, 75,191 quarters; wheat, 106,000 quarters; horses, 7566; cattle, 38,323; pork, 58,819 cwt.; beef, 26,326 cwt.; herrings, hides, eider-down, train-oil, lubfish, woollen stockings and mittens,—and other articles, the produce of the Faroe Isles, Iceland, and Greenland, £62,059; sugar and rum, the produce of the Danish West India Islands of St Croix and St Thomas, about £12,000. The greater part of the grain exported, and nearly the whole of the rapeseed, are from the duchies. The total number of Danish vessels which annually depart for foreign countries from all the ports of the kingdom is rather more than 4000; the tonnage being about 230,000. The imports, exclusive of those from Britain and the Danish West India islands, consist of piece goods, tobacco, and colonial produce from Hamburg and Bremen; linen, flax, wood, staves, and timber from Prussia; iron, tar, deals, timber, fish, herrings, and train-oil from Sweden and Norway; hemp, flax, ashes, tallow, seeds, and timber from Russia; piece goods and colonial produce from the Netherlands; and wine, salt, and piece goods from France.

The trade betwixt Denmark and the United Kingdom is insignificant. The declared value of British and Irish produce and manufactures imported on an average of the 10 years 1827-1836, was £101,037; in 1837, the amount was £103,448; in 1838, £181,404; consisting chiefly of iron, coals, and salt, with small quantities of earthenware, cotton twist and yarn, glass, hardware, lead, machinery, &c. The importations of foreign and colonial articles from the United Kingdom in the above period has greatly declined. The exports to Great Britain from Denmark chiefly consist of rapeseed, flaxseed, linseed, tares, wool, corn, pease, beans, hides, and bark. A considerable increase is observable of late years in the importation of wool and rapeseed, now the two principal articles. About 25,000 tons of British shipping (vessels 127) annually arrive in the Danish ports, more than 4-5ths of which enter Copenhagen.

The principal ports are Copenhagen and Elsineur.

Copenhagen, one of the best built cities in Europe, stands on the E. coast of Zealand, in lat. 55° 41′ N. and long. 12° 35′ E.; pop. 115,000. The walls extend nearly 5 miles, and are surrounded with a chain of bastions and a broad ditch. The harbour, formed by a narrow channel running between the city and the island Amak, is capable of containing 500 vessels, and possesses depth sufficient for ships of the largest size. Exports are principally the produce of the soil, and colonial articles; and the imports are sugar and coffee, chiefly from the island of St Croix, with small quantities of iron, oil, blubber, tar, fish, and fruit. About 1900 vessels arrive annually from foreign ports.

Elsineur, in lat. 56° 2′ N. and long. 12° 37′ E., stands on Zealand, about 20 miles N. from Copenhagen, at the narrowest part of the strait between the Cattegat and the Baltic, called the Sound; pop. 7122. The harbour is accessible only to vessels of small draught, but the town derives importance from its being the place where a toll is levied by the Danish government on all vessels passing the Sound. [Sound-Dues.] Above 12,000 anchor in the roads annually for this purpose, the supplying of which with stores forms the principal trade of the place.

The chief other ports are Altona, Kiel, Flensborg, Tonningen, Aalborg, Kioje, Nostoed, Corsoer, Callundborg, and Eckenforde. Many parts of the Danish coast are useless, owing either to the want of deep water, or the numberless banks, bars, and islands which line it. The shores of the islands adjoining the Bialtic are also so flat and irregular as to be unapproachable in most quarters by large vessels.

MEASURES, WEIGHTS, MONEY, FINANCES, &c.

Measures and Weights.—The ell of 2 Rhineland feet = 24¾ Imp. inches; the mile of 2400 ruthes = 8244 Imp. yards, or 4·684 British statute miles.

The Danish acre, or ton of land, forms an area of 14,000 square ells of 2 feet, and from 10 to 25 of such acres are reckoned to each *ton of hard corn*, in proportion to the quality of the soil.

The viertel of 4 kans, or 8 pots = 1·70 Imp. gall.; the hogshead of 30 viertels = 51 Imp. galls.; the ahm of 4 ankers = 33·14 Imp. galls.

The toende or barrel of 8 skieps, or 144 pots = 3·83 Imp. bushels, or 60 barrels = 29 Imp. qrs. nearly; the last of corn contains 12 toendes, or 45·91 Imp. bushels; the last of coals 18 toendes; and the last of oil, butter, or herrings, 12 *beer* toendes, each of 136 pots.

The shippond of 20 lisponds, or 320 lbs. = 3¼ cwt. nearly; and the centner of 100 lbs. = 110¼ lbs. avoird. The ship-last is 4000 Danish lbs. The Copenhagen mark of 8 ounces used in weighing gold and silver = 3633 troy grains.

Money.—Accounts are generally stated in rigsbank dollars, each divided into 6 marks, or 96 skillings; but in some of the larger mercantile houses they are kept in Hamburg marcs banco. The rigsbank dollar, coined at the rate of 18½ from the Cologne mark of fine silver (3608 troy grains), is equal to one-half of the old species-dollar, and when of full weight is worth about 2s. 2½d.; the par of exchange with London being 9 R. D. 10 skill. per £1. Nearly all the exchange business, however, is transacted through the medium of Hamburg, the par being 200 R. D. for 300 marcs banco, independent of the agio on banco.

The National Bank at Copenhagen, formerly called the Royal Bank, or *Rigsbank*, issues notes for 1, 5, 10, 50, and 100 rigsbank dollars; these are current at a fixed discount for specie, called *rigsbank silver value*, which is adjusted by certain authorities quarterly. The circulating medium consists almost wholly of this paper, and according to recent statements it is now nearly of equal value with specie. The coins or rather tokens of inferior value are marks and skillings.

There is no established usance, but bills are generally made payable on a certain day, and 8 days of grace are allowed.

Finances.—The public revenue, in 1837, amounted to £1,584,133, of which land-tax, £395,890; customs and excise, £416,334; crown property, £181,831; sound-dues, £213,997; other receipts, £376,061. The expenditure in the same year was £1,561,920; including for army and navy, £437,183; interest of debt, £521,065; sinking fund, £97,882.

The public debt on 1st January 1838 was £13,969,035; of which home debt, £7,742,888; foreign debt, £6,226,147. The latter includes a loan raised in London of £4,940,326, bearing interest at 3 per cent., the dividends on which are payable 31st March and 30th September by Messrs Rothschild.

DEPOSITS. [Bank. Currency.]

DERBYSHIRE SPAR. [Fluor Spar.]

DERELICT, any thing forsaken or left. It is used to express vessels forsaken at sea, and found without any person in them. Of these the Admiralty has the custody, and the owner may recover them within year and day. An allowance is made for the salvage of derelict vessels, where it has been attended with danger. (*Sir T. E. Tomlins' Dictionary.*)

DESIGNS or patterns for various articles of manufacture may be rendered the subject of copyright, and thus secured, for a limited time, for the exclusive use of the inventor. There is copyright in patterns on linen, cottons, calicoes, or muslins; also on fabrics composed of wool, silk, or hair, and on mixed fabrics composed of any two of the following materials, namely, linen, cotton, wool, silk, or hair. The privilege exists for three months from the publication (by manufacture and sale), provided the name of the proprietor be printed at each end. (34 Geo. III. c. 23; 2 & 3 Vict. c. 13.)

Copyright extending to one year, and in some cases to three years, is granted in certain other manufactures, by the act 2 & 3 Vict. c. 17, of which the following is an abstract:—

§ 1. Proprietors of designs for the following purposes, not published before 1st July 1839, are to enjoy a copyright of one year from the date of registration:—1st, For the pattern or print to be either worked into, or worked on, or printed on, or painted on, any article of manufacture, being a tissue or textile fabric; those which enjoy the three months' copyright just stated are excepted. 2d, For the modelling, casting, embossment, chasing, engraving, or for any other kind of impression or ornament, on any article of manufacture, not being a tissue or textile fabric. 3d, For the shape or configuration of any article of manufacture, except lace, and those articles which enjoy the said three months' copyright. But every proprietor of a new design for the modelling, casting, embossment, chasing, engraving, or any other kind of impression or ornament on any article of manufacture, being of any metal or mixed metals, shall have the sole right to use the same during three years. The proprietor must register his name; and every article published by him, on which such design is used, must have thereon the name of the first registered proprietor, the number of the design in the register, and the date of registration. The author of every design is considered the proprietor, unless he have for a consideration executed the work on behalf of another, who shall then be considered the proprietor; and every person purchasing for a consideration shall be considered the proprietor.

§ 2. The title of a purchaser may be entered on the register. § 3. Any one using the design, without leave in writing from the proprietor, forfeits not less than £5, or more than £30. § 4. Penalty may be recovered in England, Scotland, and Ireland; but all proceedings must be instituted within six months after the offence. § 5. Provision made for register of designs by Board of Trade. § 6. Three copies must be sent to the registrar; one to be returned with a certificate, another to be filed, and a third to belong to the P. C. Committee of Trade. § 7. The certificate of registration is evidence of the design, &c.

The number of designs registered under this last act, from 1st July 1839 to 31st January 1840, was as follows:—1st class, 14; 2d class, 184; 3d class, 46; designs exceeding one folio page, 21; designs for articles in any metal or mixed metal, 68. Fees, £413.

DEVIATION, *in Marine Insurance.* It is one of the implied warranties in the contract of insurance, that the voyage insured for shall be strictly adhered to, and so if a different voyage is pursued, or that stipulated for is voluntarily departed from, the contract is terminated, and the underwriter is discharged from liability. Deviation does not void the contract, for the underwriter retains his premium, and is liable to all loss up to the point of deviation. Though the loss happen after the ship has returned to her proper course, and though it were distinctly proved that it was not caused, or even influenced by the deviation, the insurer would still be released, for the contract having been terminated by the deviation, cannot become binding again without a new agreement. A deviation is said to be "a voluntary departure, without necessity, from the usual course of the voyage." It is not to be inferred from this that the vessel must have followed the route that can be proved to be the most direct and expeditious, but that she has followed the usual customary track, sanctioned by safety and convenience. "Therefore, the stopping at certain places in the course of the voyage, though out of the direct line, if it have been customary to do so, is not a deviation, but a part of the voyage" (*Marshall*, 179). Still a few instances where vessels have taken a point out of their direct course will not constitute usage in favour of the practice. If deviation is once shown to have taken place, the smallness of its extent will not justify it. It is deviation if a ship insured, with liberty to touch at a particular port, touches at another. It was formerly maintained that a ship entitled to touch at a port was not entitled to trade there, but it has been since held, that if there is no delay, and no increase of risk, trading is not a breach. If there are several ports of discharge, it is held deviation to visit them in an order different from that in which they appear on the policy, and it certainly is so, if the risk is thereby increased. If the ports of discharge be not specifically named in the policy, they should be taken in their geographical order. It appears to be no deviation to proceed direct to any one of a set of ports thus insured to, if the others are not visited at all. It is deviation to touch at a port at which it is not customary to touch, although the ship must pass it; or, there being several tracks, to select a less safe and eligible one for the purpose of accomplishing objects foreign to the voyage. Where a ship is insured for a voyage, with liberty to touch "at any one port" of some country, it is held to mean a port in the course of the voyage, if the country be so situated as to admit of this interpretation. Unnecessary delay is always a deviation. It appears to be considered deviation to *prescribe* any one of several tracks to the master. If a specific track is predetermined by the insured, it ought to appear on the policy, and if it do not, the underwriter is entitled to expect that he will have the benefit of the master's choice of tracks, whose duty it is, when he is at liberty so to do, to adopt the best. Though there be an intention to deviate, and instructions given to that effect, the underwriter's responsibility will not be affected till the dividing point is reached, and if the vessel be previously lost, he is liable. Deviation will be justified by necessity, though proceeding from a cause not insured against, as, from stress of weather, want of repairs, desertion or mutiny among the crew, attempt to escape from an enemy, or the taking advantage of an opportunity of joining convoy in time of war. The ship may deviate to be relieved of part of her cargo, if too heavily laden, or to take in additional cargo, where necessary for ballast. Deviation to succour ships in distress is held justifiable on principles of public policy. It is a general principle that deviation will not be justified, if for the purpose of providing against the consequences of a fault of the insured, so as to allow one warranty to be infringed to cover the infringement of another. (*Park*, 437-475. *Marshall*, 174-206.) [INSURANCE.]

DIAMOND (Fr. Ger. & Du. *Diamant*. It. Sp. & Por. *Diamante*), a crystalline mineral, which, on account of its lustre and hardness, is reckoned the most valuable of all gems. It is chiefly found disseminated in gravel, or embedded in sandstone, in India and Brazil, and, according to recent accounts, in the Ural Mountains. It occurs generally in single or in unattached crystals, sometimes with plain, but more frequently with rounded surfaces. The colours are commonly white or gray, sometimes however red, brown, yellow, green, blue, and black; but the two last are rare. Lustre splendent, and internally perfect adamantine. Cleavage, parallel to the sides of an octahedron, which is its primary form, subject however to varieties, and the faces are frequently curvilinear; transparent, but sometimes rendered opaque by foreign substances; refracts single; scratches all known minerals, and can only be cut and ground by its own substance; rather easily frangible; streak grayish. Sp. gr. 3·4 to 3·6. It consists of pure carbon. The finest, called diamonds of the first water, should be perfectly crystalline, resembling in complexion a drop of the purest water. When they fall short of this perfection, they are said to be of the second, third, or fourth water, till the stone may be properly called a coloured one. If yellow, blue, green, or red, in a high degree, they are more in esteem than if tinctured with these colours only in a low degree. For ornamental purposes they are cut into rose diamonds and brilliants. The *Rose Diamond* is generally made out of an octahedral crystal; it is quite flat underneath, and its upper part cut in divers little faces, usually triangles, the uppermost of which terminates in a point. The *Brilliant* is generally formed out of a diamond with curvilinear faces; it is cut in that form both at top and bottom; the table, or principal face, at top, being flat. The *Rough Diamond* is the stone in its natural state; it should be chosen uniform, of a good shape, transparent, not quite white, and free of flaws. Black, rugged, dirty, flawy stones, and those unfit for cutting, are however pulverized, and employed to polish others, besides being applied to various uses in the arts; and for such purposes they are in constant demand.

The weight and value of diamonds are estimated in carats, each divided into halves, quarters, eighths, &c. This carat weighs 3⅙ troy grains, or 205⅙ French decigrammes, and is the only weight considered uniform in all countries. The comparative value of diamonds of equal colour, cleanness, and shape, is estimated according to the squares of their respective carat weights. The average price of *rough* diamonds that are worth working, is £2 for the first carat. Hence the value of a rough diamond weighing 4 carats is £32; because 4 × 4 × 2 = 32. *Cut* diamonds are supposed to have lost half their original weight, and are therefore valued according to the square of double their actual weight. Thus the value of a cut diamond weighing 4 carats is £128; for 8 × 8 × 2 = 128. This rule, however, is inapplicable to those which are above a certain weight,—the ordinary limit being 20 carats. The largest diamond ever known was brought to the King of Portugal from Brazil. It is uncut, weighs 1680 carats, and its value is often quoted, according to the above rule, at £5,644,800. Similar extravagant valuations are applied to the famous Russian one, weighing 779 carats; to the Mogul, weighing, cut, 280 carats; and to others; but it does not appear that any sum exceeding £150,000 has ever been given. The last great sale of jewels was in London on July 20, 1837, for the distribution of the Deccan booty, obtained by the army under the Marquis of Hastings. On this occasion, the magnificent Nassau diamond, weighing 357½ grains of the purest water, brought only £7200.

The *glazier's pencil diamond* is a fractured portion, weighing about 1-60th of a carat, and of a trapezoidal shape, set in a wooden handle. Two kinds are now in use, the common pencil, worth 12s., and the patent pencil, worth 18s.

DIAPER (Fr. *Linge ouvré*. It. *Tela testuta a opere*. Ger. *Drell*), a flowered linen fabric commonly used for table-linen, napkins, and other domestic purposes. It is manufactured in Scotland, the north of Ireland, and Germany. Diapers are now also made of cotton, in imitation of the linen goods bearing the same name.

DICE. [Cards and Dice.]

DILIGENCE, SUMMARY, a term used in the law of Scotland to express an expeditious process, by which performance of documentary obligations is enforced. It was formerly confined to the Court of Session, but since the 1 & 2 Vict. c. 114, it may proceed before the Sheriff. The document on which it is founded must be registered in the books of the court; and the principle on which execution proceeds is, that a judgment or decree of the court has been given in favour of the holder of the document by consent of the granter. The documents thus privileged are, 1*st*, Regularly executed contracts, containing a clause authorizing such registration for execution, like the warrant of attorney in England. 2*d*, Bills and promissory notes properly framed and duly negotiated. The former of these qualifications requires accurate attention to stamp, designation of parties, sum, and place of payment; the latter comprehends presentment, notice of dishonour, and proper noting and protest. To authorize summary diligence, the protest, if for non-acceptance, must be registered within six months after the date of the bill; if for non-payment, within six months after the day of payment.

DIMITY (Fr. *Basin.* It. *Dobletto*), a cotton stuff, similar in fabric to fustian, from which it differs chiefly in having ornaments woven in it, and in not being dyed. Its colour should be delicately white. In the weaving, longitudinal stripes are usually raised just above the surface of the piece, and dimities are called *single corded*, or *broad striped*, according to the flatness and breadth of these stripes.

DISCOUNT is a premium paid for ready money, when, by agreement or the usages of trade, it is understood that credit is given. A bill or note is said to be discounted, when a third party, in respect of the credit of the names on it, agrees to pay its contents to the holder before it becomes due, deducting the interest, and, in some cases, commission for trouble and expense. There are certain penalties and disabilities levelled by the usury laws against pecuniary accommodations on which more than five per cent. of interest is taken [Usury], which still, though to a very limited extent, apply to bills of exchange. A person discounting a bill, if he deduct interest at 5 per cent., receives, as shown below, more than 5 per cent. interest on the accommodation. But it has been the practice, not only to allow discounters of bills to receive more than the 5 per cent. interest in this form, but likewise to allow a small additional sum in name of commission and expenses. The amount has been held matter of inquiry by a jury. ¼th per cent. appears to be the general allowance. 7s. 6d. per cent. has been found usurious where no expense or considerable trouble has been occasioned; but in cases of long and complicated accounts, 10s. per cent. has been allowed (*Chitty on Bills*, 99-104). At the renewal of the bank-charter (3 & 4 Wm IV. c. 98), bills at three months were exempted from the usury laws. The privilege was extended by 7 Wm. IV. and 1 Vict. c. 80, which enacted that, till 1st January 1840, bills and notes at not more than twelve months, or having no more than that period to run, should not be null, and should not subject parties to liabilities, by reason of interest charged in negotiating them. The enactment was continued to 1st January 1842 by 2 & 3 Vict. c. 37.

Discount in *Arithmetic* is the difference between a sum of money due at a future period, and its present value; and the rule for finding it is this:—As the amount of £100, increased by its interest at the rate and for the time given, is to the given sum or debt, so is the interest of £100, at the rate and for the time given, to the discount of the debt. Thus, to find the discount of £100 for one year at 5 per cent. we have—

$$£105 \quad : \quad £100 \quad :: \quad £5 \quad : \quad £4:15:2\tfrac{6}{7}$$

which is 4s. $9\frac{1}{7}$d. less than the interest for the same time; *the difference being in all cases equal to the interest on the discount for the given time.*

Hence the rule adopted by bankers and others in charging discount is not arithmetically correct; for as the true value of the discount is equal to the difference between the sum due and its present worth, it is equal only to the interest of that *present worth*, instead of the interest on the *whole debt.* [Interest.]

DITTO, a term derived from the Italian word *detto* (that which has been said), and used in accounts to avoid repetition. It is commonly abbreviated into *Do.*

DIVIDEND, that portion of any joint profit or fund which is given out to be shared or divided. It is usually expressed at so much per cent. or per pound sterling.

Dividend, in Bankruptcy, is used to express the proportion (generally rated at so much per £1) of a creditor's debt, which he receives from the bankrupt estate.

In England and Ireland, the first dividend is declared at a meeting called and advertised by the commissioners, not less than four or more than twelve months from the issuing of the fiat of bankruptcy. The second dividend is declared at a similar meeting within 18 months after the fiat. [Bankruptcy.]

In Scotland, the first dividend is declared within 14 days after the expiry of six months from the commencement of the sequestration, and paid on the expiry of eight months from the commencement. A dividend is similarly declared and paid at every interval of four months, till the estate is exhausted, or the sequestration terminated. The commissioners may postpone any dividend till the next stated period, giving notice in the Gazette. [Sequestration.]

DOCK, an artificial receptacle for shipping, the entrance of which is generally closed by gates. There are two kinds:—*1st*, *Wet-docks*, in which a uniform level of water is maintained, so that the business of loading and unloading can proceed without interruption, whilst the ships, being kept always afloat in still water, and sheltered from the effects of the tides, their hulls, rigging, and cables, are better preserved than in an open harbour or roadstead. *2d*, *Dry-docks* or *graving-docks*, used for inspecting or repairing ships, for which purpose they are so contrived that the water may be admitted or excluded at pleasure, in order that a vessel can be floated in by the tide or otherwise, and that the water may run out with the fall of the tide, or be pumped out, the shutting of the gates preventing its return. In London and other ports, the wet-docks are generally surrounded by warehouses, and enclosed by walls; in this way the greatest facilities are given to the unshipping and warehousing of merchandise, while, at the same time, the vessels and their cargoes are rendered secure from depredation.

I. Docks of the Port of London.

The commerce of London, which had been gradually increasing during the first half of the eighteenth century, outgrew in the second half the existing accommodation for shipping; and the port, at particular seasons, was often nearly blocked up by fleets of merchantmen, many of them lying at anchor in the middle of the stream, and discharging their cargoes into lighters and barges. The only dock at that time was the Greenland Basin (now the Commercial Dock), on the south side of the river, which was used only by a few vessels in the whale fishery. The warehouse accommodation too was quite insufficient. The quays were frequently covered with sugar hogsheads, piled six or eight tiers in height; while bales, barrels, boxes, and bags, were to be seen heaped together in the utmost confusion; and at the seasons when the East and West India fleets arrived, the delay, caused by the want of accommodation, was both harassing and expensive. Along with these defects, there existed an extraordinary system of pillage and depredation, carried on chiefly by lightermen, watermen, and labourers, and, in not a few instances, winked at and shared by revenue-officers, numbers of the crews, and even by the mates and captains; these again being backed by a host of publicans and receivers on shore.

These abuses led, in 1798, to the establishment of the Thames police, and about the same time to the formation of the docks; the first being the West India Docks, for the construction of which an act was passed in 1799.

The West India Docks, situated at the "Isle of Dogs," which lies in a bend of the river between Blackwall and Limehouse, were begun in 1800, and by the end of 1802 were sufficiently advanced for vessels unloading. The entire ground occupied by them is about 295 acres; and the extent of the water area is upwards of 60 acres, capable of containing 500 large merchantmen. There are two large docks; the north or import dock, used for discharging vessels, having an area of 30 acres, and the south or export dock, for loading them, having an area of 25 acres. These lie parallel to each other, and are divided by a range of warehouses. There are besides two entrance basins, one at Blackwall, 5 acres; the other at Limehouse, 2 acres in extent; in addition to which, the Company have purchased the canal cut by the city across the Isle of Dogs, and converted it into a dock for wood-laden vessels. There has been at one time in these docks, on the quays, under the sheds, and in the warehouses, colonial produce amounting to the value of £20,000,000. The capital of the joint-stock company by whom they were constructed is £1,380,000; and the speculation has been an exceedingly successful one. Formerly, all vessels engaged in the West India trade were compelled, by the charter granted to the Company, to unload in these docks; but this regulation is no longer in force.

The London Docks, begun in 1801, and opened in 1805, are situated at Wapping. They consist of a western dock of 20 acres extent, a tobacco dock of about 1 acre, and an eastern dock of seven acres; the whole, with the warehouses and other erections, forming a magnificent establishment covering 71 acres, and affording accommodation for about 800 ships. The tobacco warehouse covers nearly 5 acres, and can hold 24,000 hhds. There is also cellarage for nearly 70,000 pipes of wine; one of the vaults having an area of seven acres. The capital stock of the Company is

£3,238,310, 5s. 10d.; besides which £700,000 were raised by the issue of bonds, bearing 4 per cent. interest.

The East India Docks, situated at Blackwall, below the entrance to the West India ones, consist of an import dock, of the area of 18 acres, and an export dock, having an area of 9 acres; besides which there is an entrance basin, common to both, of 3 acres. They were originally formed for the accommodation of ships in the East India trade, but they are now open to vessels from all parts. Capital stock, £623,334, 10s. 11d.

The Commercial Dock, composed in part of the old "Greenland Basin," is situated at Rotherhithe, and occupies altogether 49 acres, about 4-5ths of which are water. It is chiefly used by vessels in the corn and timber trades. Capital stock, £313,250; besides which, £27,600 were raised by the issue of bonds, bearing interest at 4 per cent.

The East Country Dock, constructed in 1807, has an area of about 6½ acres. It adjoins the Commercial Dock to the south; and is chiefly frequented by vessels employed in the European timber-trade. Capital stock, £103,800.

St Catherine's Docks, lying immediately below the Tower, are those nearest to the city. They were begun in May 1827, and partially opened in October 1828, and consist of two basins, each capable of receiving vessels of 800 tons burden. They afford accommodation for about 150 or 160 ships, besides small-craft; and cover an area of 11½ acres; but the whole space, including that occupied by quays and warehouses, is about 24 acres. These docks are frequented by vessels in the East India and North and South American trades; and the warehouses are so arranged that goods are taken into them at once from the ship. The depth of water at spring tides is 28 feet in the lock; and thus ships of 600 and 800 tons can come up the river with a certainty of admission; the arrangements also admit of the vessels being docked and undocked by night as well as by day. Capital stock, £1,352,800; besides which, the Company have raised, by the issue of bonds, £200,000 at 4 per cent., and £500,000 at 4½ per cent.

The Grand Surrey Canal Dock is a basin at the entrance of the Surrey Canal at Rotherhithe. There is also the *Regent's Canal Dock*.

II. The Liverpool Docks.

The first commercial wet-dock made in England was formed in 1708 at this port, then a place of no consideration. It was called the "Old Dock," but having been filled up, its site is now occupied by the custom-house. A second was constructed about the middle of last century. Additions were afterwards made at various periods, and the docks of Liverpool now form an immense range, extending about two and a half miles along the eastern bank of the river Mersey. These have been constructed on a scale of extraordinary magnificence, and form one of those characteristics of commercial greatness for which this town is unrivalled.

The aggregate water area of the docks is nearly 100 acres; and the quay space extends in length about 7½ miles. The whole, excepting the work called the "Duke's Dock," in possession of the Duke of Bridgewater's executors, is the property of the corporation of the town, to which they have proved a great source of wealth, having yielded a very large revenue in proportion to the money expended on their construction. This has arisen partly from their never having had to make any outlay for the purchase of land, partly from their having avoided the expense of building warehouses, but chiefly from the labour of excavating being in a great measure saved, owing to their area having been enclosed from the river.

Table showing the Water Area and Length of Quay Space of the Liverpool Docks.

I. *Wet Docks.*	Water area.	Quay length.
	Sq. yards.	Yards.
Clarence dock and lock	29,313	914
Half-tide basin	17,605	586
Waterloo dock and lock	30,765	1,012
Trafalgar do	33,642	1,050
Victoria do	29,063	839
Prince's do	57,129	1,613
George's do	26,794	1,001
Canning do	19,095	500
Salthouse do	23,025	759
King's do	37,776	875
Queen's do	51,502	1,255
Half-tide do	13,185	497
Brunswick do	60,824	1,092
I. *Wet Docks.*	Sq. yards.	Yards.
Union dock	9,245	483
Coburg do	23,622	572
Total	462,605	13,048
II. *Dry Basins.*		
Prince's basin	20,909	509
Seacombe do	1,805	188
George's do	16,372	455
George's Ferry do	1,344	160
Old dock gut	7,737	447
Queen's basin	24,391	601
S. Ferry do	2,927	205
	75,485	2,565

The Clarence, Trafalgar, and Coburg Docks are appropriated to the accommodation of steamers, the last being exclusively for the use of the Transatlantic and Mediterranean vessels.

The following is a statement of the number of vessels by which the docks have been frequented in different years, taken at intervals, and their aggregate tonnage; also the amount of dues collected thereon, and on the goods loaded and unloaded from the same. The progressive increase which it exhibits in the trade of Liverpool since the middle of last century, is, we believe, unexampled in the history of commerce :—

Years.	Vessels.	Tonnage.	Dues.	Years.	Vessels.	Tonnage.	Dues.
1752	....	....	£1,776	1810	6,729	734,391	£65,782
1760	1,245	....	2,330	1815	6,440	709,849	76,915
1770	2,073	....	4,143	1820	7,276	805,033	94,413
1780	2,261	....	3,528	1825	10,837	1,223,820	128,692
1790	4,223	....	10,037	1830	11,214	1,411,964	151,330
1800	4,746	450,060	23,380	1835	13,941	1,768,426	217,826
1805	4,618	463,482	33,365	1840	15,998	2,445,708	197,478

The dock-dues are now extremely moderate, a great reduction having taken place in the year 1836.

By an act passed in 1825, the management of the docks is vested in a committee of 21 members, of whom 13 are appointed by the corporation, and 8 are elected from their own body by those merchants who pay each not less than £10 a-year in rates.

III. Docks at other Ports of the United Kingdom.

The docks at the other ports, though much inferior in point of extent to those of London and Liverpool, are still works of great national importance. The principal are those of Bristol, Hull, and Goole, Leith, and Dundee.

The Bristol wet-dock is of a character different from those of London and Liverpool, being formed by digging a new course for the river Avon south of the city, and converting the whole of the old channel into one floating harbour, about 3 miles in length. It was commenced in 1804, and opened in 1809. The quays enclose one end of the city, and form 3 sides of a parallelogram; and there are two basins for the temporary accommodation of vessels entering or quitting the harbour. The estimated expense of the dock was £300,000, but its actual cost was about £600,000. It was constructed by a company whose present capital consists of 2209 shares of £147 each; besides which a debt was contracted of £268,342, bearing interest at 5 per cent. The maximum dividend which the company are permitted to draw is 8 per cent., but it has seldom exceeded 2 per cent. The management is vested in 27 directors, of whom 9 are chosen by the proprietors, 9 by the ancient guild of merchant venturers, and 9 by the corporation of the city, in whom the dock is vested after payment of the debt and capital.

Hull possesses 3 wet-docks, which occupy the site of its ancient fortifications; the Old Dock, formed in 1775; the Humber Dock, begun in 1807; and the Junction Dock, connecting the two preceding, which was commenced in 1826, and completed in 1829. The area of the quays is 15,643 sq. yds.; the locks are 120 feet long, 36 feet broad, and 25 deep; and the whole water area of the three is about 26 acres, affording accommodation for 300 vessels; but this being insufficient for the increasing trade of the port, farther works are in contemplation. Attached to the Humber Dock, which is situated at the west part of the town, is a capacious basin with its piers. At *Goole*, a new port, situated near the junction of the Ouse with the Humber, about 22 miles more inland than Hull, there are two wet-docks, one adapted for sea-going vessels of considerable burden, the other for the small-craft which navigate the rivers and canals.

Leith has two wet-docks, one opened in 1806, the other in 1817, each of which is about 300 feet wide, and between 700 and 800 feet long; their joint water area is about 10 acres, and they are capable of accommodating nearly 150 vessels of the size which usually enter the port. Such as draw 17 feet water can be admitted at spring-tides, but at other times the depth of the dock-sill is seldom above 14 feet. They are surrounded by well-constructed quays, upon which are erected appropriate warehouses; and there are two commodious dry-docks, for the building and repairing of ships. The whole cost of the docks was £268,993, mainly consisting of advances by government, to whom £228,374 still remains due; though, by a late arrangement (1 & 2 Vict. c. 55), they have allowed £125,000 to be raised, and preferably secured over the dues, for the erection of additional works. Besides these two wet-docks, Leith possesses a tide-harbour or basin. The management of the whole is vested in 11 commissioners, of whom 5 are appointed by the Treasury, 3 by the town-council of Leith, and 3 by the town-council of Edinburgh. The port-dues annually levied on vessels and goods amount to £21,000: but the total revenue of the commissioners, including warehouse-feus, rents, and ballast-dues, is about £26,500.

Dundee possesses at present two wet-docks, King William's, of 6¼, and Earl Grey's, of 5¼ acres. The breadth of the lock of the former (to which is attached a graving-dock) is 40 feet; of the latter 55 feet, being made of this width to admit steamers. Connected with these two docks, there is a tide-harbour, of 4¾ acres. A third wet-dock, of 14½ acres, is now nearly finished, the lock of which is 60 feet; and the harbour plan embraces another of 9½ acres, with a tide-harbour between the two latter, of 11 acres in extent. The debt created on account of these works amounted, at 30th May 1840, to £230,194. The management of the whole is vested in a parliamentary commission; and the annual amount of their revenue is about £16,700.

The great public dockyards of this kingdom are situated at Chatham, Devonport, Portsmouth, and Plymouth, but a description of these magnificent arsenals does not fall within our plan. They mostly contain grand basins, in which vessels are received with all their standing and running rigging; building-slips, docks for repairing, rope-house, anchor-wharfs, an anchor-forge, a copper-sheathing foundery and mills; block, mast, sail and rigging, and other storehouses,—in a word, all that is requisite for the construction, equipment, armament, and refitting of ships of war. [PORT.]

DOCKET, in *English Law*, signifies a brief in writing. In trade the term is often applied to a short certificate, summary, or memorandum.

DOCKET *in the Bankruptcy Law of England*. When the petitioning creditor lodges in the Bankrupt Office his affidavit of the debt, the act of bankruptcy, and his bond undertaking to pursue the bankruptcy, entry is made in a book called the "Docket Book," and the petitioner is said to have thereby "struck a docket." [BANKRUPTCY.]

DOG, a well-known quadruped (*Canis vulgaris*, Linn.) varying greatly in stature, form, colour, and the quality of the hair. Its period of gestation is 63 days, and the whelps, which often amount to 8 or 9, are born blind, and do not see till after the lapse of 10 or 11 days. The growth of the animal is complete at two years; at the expiration of 5 years it is considered old, and the limits of its existence rarely exceed twenty years. No trace of the dog is to be found in a primitive state of nature; and its parent stock is by many supposed to be the jackal or wolf, particularly the last, to which in many respects it has a strong affinity. "The dog exhibits," says Cuvier, "the most singular, the most complete, and the most useful conquest that man has made. The whole species is become our property; each individual is entirely devoted to his master, adopts his manners, distinguishes and defends his property, and remains attached to him even unto death; and all this springs, not from mere necessity, not from constraint, but simply from *reconnaissance* and a true friendship. The swiftness, the strength, and the highly developed power of smelling of the dog, have made him a powerful ally of man against the other animals, and were perhaps necessary to the establishment of society. It is the only animal that has followed man over all the earth." This account, however, applies solely to the animal as it exists in Europe and America. By Mohammedans and Hindoos it is regarded as impure, and neither will touch one without an ablution; they are, therefore, unappropriated, and prowl about the towns and villages, devouring the offal, thus performing the office of scavengers. In China, Cochin-China, the Society Islands, and other places, it is used as food, and puppies are considered a great delicacy.

The following is a list of the duties payable on dogs in this country, to which 10 per cent. was added by the late act 3 Vict. c. 17:—

For every greyhound . . .	£1 0 0
For every hound, pointer, or setting dog, spaniel, lurcher, or terrier; and for every dog, where two or more are kept, of whatever denomination the same may be, except greyhounds	0 14 0
For every other dog where only one is kept	0 8 0
Persons compounding for their hounds are to be charged . . .	£36 0 0

Exemptions.—Dogs wholly kept and used in the care of sheep or cattle, provided they are not of the descriptions chargeable with the duties of £1 and 14s. above mentioned; also dogs under six months old.

DOGGER, a kind of vessel used by the Dutch in their fishings, which is similar in form to the GALLIOT; some have but one mast, others two.

DOLLAR, the most common silver coin in the world, and particularly in the western hemisphere, throughout the greater part of which it is likewise the integer of account. It is coined in various states, but the general type of the whole is the Spanish dollar, which is minted at the rate of 8½ to the Castilian mark (= 3550¼ troy grains) of silver, of the fineness of 10¾ dineros, that is 10¾ parts fine out of 12. It accordingly weighs 417·70 troy grains, and contains 374·19 troy grains of pure silver; and, reckoning British standard silver at 5s. per ounce, is worth, when of full weight, 4s. 2½d. sterling; but its more general value, as deduced from assays, is 4s. 2d., the rate assigned to it in the proclamation issued by our government on 21st September 1838, for regulating its circulation in the West Indies. This coin is sometimes called the "hard dollar" (*peso duro* or *fuerte*); and the term "pillar dollar" is frequently applied to the pieces coined in Mexico since 1772, from their being impressed on one side with the arms of Spain placed between two pillars. The dollar is still minted at the rate of 8½ to the mark, in all the Spanish-American republics, except the Colombian. That of the United States is of nearly the same value, 4s. 2⅙d., containing 371¼ grains of pure silver. The German and Italian dollars are in value rather less.

The dollar, being the shape generally communicated to silver in the mining countries, is one of the commonest forms in which that metal occurs in the markets of the world as bullion; and hence its almost universal circulation. But although nearly all the American dollars are of the same intrinsic value, they are not accounted as such in trade, a higher rate being generally given for the Spanish or pillar dollar, from its being that best known, and most readily taken by traders in semi-barbarous countries. Thus at Canton, where the circulating medium consists almost entirely of dollars, none but the Spanish or pillar dollar is received by the Chinese merchants.

In several of the South American States the dollar of account is, in their internal trade, reckoned in small base coins; in others, as in Buenos Ayres, it is of still less value, from being estimated in depreciated paper.

DOMETT, a thin kind of flannel, of which only the weft is wool, the warp being composed of cotton. It is chiefly used by the poorer classes; also for shrouds and the lining of coffins.

DOONCHA, an Indian plant (*Æschynomene cannabina*) cultivated in Bengal on account of its fibres, which, though coarse, are much employed there in making cable-ropes. These are generally used in India for the drag-ropes of fishing-nets, but they appear to be of too perishable a nature for the rigging of ships.

DOUBLOON, the most common Spanish and American gold coin. It is of the same weight as the DOLLAR, being minted at the rate of 8½ to the Castilian mark, 21 carats fine. It therefore weighs 417·70 troy grains, of which 365·49 grains are pure; and its value, when of full weight (estimating British standard gold at £3, 17s. 10½d. per oz.), is £3, 4s. 8¼d.; but its more general value, as deduced from assays, is only £3, 4s. 1d., or £3, 4s. The latter is the rate assigned to it in the proclamation issued by our government on 21st September 1838, for regulating its circulation in the West Indies. There are also half and quarter doubloons of proportional value. This coin being the form generally given to gold in the mining countries of S. America, is, like the dollar, extensively circulated as bullion.

DOWLAS, a coarse linen fabric.

DOWN, the soft fine feathers from the breasts of birds, particularly of the duck kind. The most valuable is *eider-down*. It is plucked by eider-ducks from their breasts, in order to line their nests; and is generally obtained by the plunder of these nests. The quantity afforded by one female during the period of laying is stated to be half a pound, after being cleansed. Its lightness and elasticity are said to be such, that 2 or 3 lbs. of it, squeezed into a ball which may be held in the hand, will swell out so as to fill a case large enough for the foot covering of a bed. Large quantities of eider-down are collected in the Danish colonies in Iceland and Greenland, and sent to Copenhagen, from whence it is exported. It is also gathered on the coast of Norway, and some parts of Sweden. According to Captain James Ross, much of what is called eider-down is obtained from the *ring-duck*; it is, however, equally good.

DOW, OR DAU, a kind of vessel navigated by Arabs, which is met with all over the Indian Ocean. It varies in size from 5 to about 350 tons, and is extremely sharp at the bow, the deck being at least one-third longer than the keel. The planks in the smaller ones are sewed together with coir-rope; the seams are calked with cocoa-nut husks; and the bottom is covered with a composition consisting of lime and oil or tallow, which hardens under water, and protects the wood from marine worms. They have a single mast, stepped a little ahead of the centre, and raking forward, upon which is set a coarse square-sail. They have an open poop on the stern; the rudder is very large, and often secured by ropes only.

DRAB, a woollen fabric, generally woven thick and double milled, being chiefly used for greatcoats.

DRACHMA, DRACHM, or DRAM, an ancient Greek weight, equivalent, according to Paucton, to 69 troy grains; also the principal silver coin, and money of account, of the new kingdom of Greece, where its weight is that just mentioned, and its value about 8¾d. sterling.

In the British system the term dram is applied to two weights,—in apothecary's weight to the one-eighth part of the troy ounce, or 60 troy grains; and to the one-sixteenth of the avoirdupois ounce, or 27$\frac{11}{32}$ troy grains; the latter, however, is seldom used.

DRAFF, or DRAFT, a small commercial allowance or deduction, now nearly obsolete. [Tares.]

DRAFT, a term sometimes applied to a bill of exchange or bank-cheque.

DRAGON'S-BLOOD, (Fr. *Sang-dragon*. Ger. *Drachenbluth*. Hind. *Hera-duky*. Palembang, *Jaremang*,) a peculiar resinous colouring principle mixed with benzoic acid and other matters, is a dark red, inodorous, and insipid substance, obtained from the surface of the ripe fruit of several species of palm (*Calamus*) indigenous to Hindostan, Cochin-China, and the Eastern Islands, especially Sumatra, at the towns of Jambi and Palembang, in which, and at Banjarmassin in Borneo, this resin is principally obtained. It is exported in considerable quantities to China and India; also to Europe, to which it is sent in the form of drops or *tears*,—of grains,—and of reeds or rods from 12 to 18 inches long, about the thickness of the finger, covered with the fronds of the palm wrapped round it with split branches. The last is the best. Other kinds are procured in India, Madeira, and near Carthagena in S. America; these chiefly occur in masses of a violet colour, and are derived from other trees besides that already mentioned, mostly the *Dracæna Draco*, and the *Pterocarpus Draco*, (Linn.); while a spurious sort is often made with colophony, olibanum, turpentine, and gum-senegal, dyed with various substances. The resin is employed as a colouring matter, an ingredient in varnishes, and in the composition of tooth-powders; it is now seldom used as a medicine.

DRAWBACK, a term used in reference to those duties of customs or excise which are repaid by government on the exportation of the commodities on which they were levied. This repayment is made to enable the exporter to sell his goods in the foreign market unburdened with duties. An account of the laws and official rules affecting drawbacks will be found under the heads Customs Regulations and Tariff.

DRAWER AND DRAWEE, in the law of bills of exchange. The former is the person from whom the direction to pay emanates: the latter is the person whom he directs to pay, or on whom he draws. The expression drawee is correctly applicable only between drawing and acceptance. The drawer's name must appear upon the bill, either in the body of it or at the end; and his liability as a party to the bill is completed by delivery to a payee. A drawer, like an acceptor, is responsible for what sums may be filled into blanks in stamps to which he puts his name. A drawer against whom recourse is to be preserved, ought to have notice of non-acceptance or non-payment. In accommodation bills, notice is not requisite, and a drawer may, by his own act, dispense with notice, as, where he has said he will call on the acceptor, and see if a bill has been paid (Chipsen *v.* Kneller, 4 *Camp.* 285). The drawer is liable to a person paying supra protest. (*Bayley. Chitty.*) [Bill of Exchange. Notice.]

DRUGGET, a slight stuff sometimes made of wool, sometimes half of wool and half of thread, corded or plain, generally the last. It is manufactured chiefly in Devonshire.

DRY-ROT, a disease affecting timber, particularly the oak, employed in ship-building. It is generally produced by fungi; and it is said that any of those that are commonly found upon decaying trees are capable of producing the disease. The circumstances that are most favourable to the development of the dry-rot fungi are damp unventilated situations, and a subacid state of the wood; the last being easily produced, especially in oak, by a slight fermentation of the sap which remains in the timber, especially if the latter has not been well seasoned before being wrought. The first sign of the evil is the appearance of small white points, from which a net-like substance radiates parallel with the surface of the timber; the former being the first stage of growth of the seeds in the fungus, the latter their thallus or spawn. These last gathering strength thrust asunder the tubes from which the wood is organized, and completely destroy the cohesion of the tissue; and the total ruin of the timber speedily ensues where circumstances are favourable to the growth of the fungi. The prevention and cure of dry-rot is of great importance in reference to our shipping; and various joint-stock companies have been formed for the purpose of subjecting timber to preventive solutions. According to Mr Kyan, timber steeped in a solution of corrosive sublimate cannot become a prey to dry-rot, so far as that disease is produced by a fungus.

DUBBER, a kind of vessel or jar made of thin untanned goat-skin, which is generally used in India to contain oil, ghee, and other liquids. Dubbers are of almost every variety of size.

DUCAPE, a plain wove stout silken fabric of softer texture than gros de Naples.

DUCAT, a gold coin common on the Continent, especially in Germany, the general value of which is about 9s. 4d. The Neapolitan ducat, however, is a silver coin worth only 3s. 3¾d.

DUCK. [POULTRY.]

DUNNAGE, a name given to the pieces of loose wood placed on the bottom and sides of a ship's hold, either to support the cargo, so that the vessel may be properly ballasted, or to prevent injury from leakage.

DUTCH-LEAF, a brass substance used for making trinkets.

DUTCH-RUSH, OR HORSE-TAIL, a hollow-stemmed leafless plant (*Equisetum hyemale*) with a cuticle composed of pure silex, which gives it a hard surface that makes it useful for polishing wood and metal, a purpose for which it is extensively used. It is generally imported from Holland.

DUTY, a general name for a tax or impost.

DYE-STUFFS. An account of these will be found under their appropriate heads. See also the article COLOUR TRADE.

E.

EAGLE, the principal gold coin of the United States, weighs 258 troy grains, 9-10ths fine, and contains 232½ grains pure; and, estimating British standard gold 11-12ths fine at £3, 17s. 10½d. per ounce, is equal £2, 1s. 1⅛d. sterling nearly. The half-eagle, the most common gold coin of the States, is of proportional value. The eagle is a legal tender for 10 dollars; hence, the value of the dollar of account, reckoned in gold, is 4s. 1¼d. sterling nearly.

The preceding is the value of the eagle according to the act of Congress of June 28, 1834, as modified by the subsequent act of January 18, 1837. As the former of these acts, however, produced an alteration which has exercised an important influence over the monetary affairs of the Union, it will be proper to explain shortly its nature and effect.

According to an act of Congress of April 2, 1792, the weight of the eagle (of 10 dollars), was fixed at 270 troy grains, and its contents in pure gold at 247½ grains; the weight of the dollar at 416 grains, and its contents in pure silver at 371¼ grains. The weight of pure gold in the eagle was thus precisely 2-3ds of that of silver in the dollar, and the relative value of gold to silver was therefore as 15 to 1. This being, at least after the resumption of specie payments by the Bank of England in 1819, an undervaluation of gold in respect to silver, all payments were made in the latter, in which the value of the dollar of account, equal to that of the coin, was 4s. 2½d. sterling. But the act of June 28, 1834, reversed this system, by reducing the amount of pure gold in the eagle to 232 grains, while it was still preserved as a legal tender for 10 dollars. No alteration having been made on the silver coin, the relative value of gold to silver became then nearly as 16 to 1, in place of 15¼ or 15⅝ to 1, its true proportion. This was an undervaluation of silver which led speedily to its withdrawal from circulation, and to the general employment of gold, in which the value of the dollar of account was 1-10th of the new eagle, or only 4s. 1¼d. sterling.

Under the act of January 18, 1837, the quantity of alloy in both the gold and silver coins was adjusted at the 1-10th part, but no change was made on their value, farther than a small fractional addition of pure metal to the gold coin, amounting in the eagle to only ⅕th of a grain.

The practical effect, therefore, of the late alterations has been to lower the intrinsic value of the gold coin about 6⅝ per cent., to substitute gold for silver as a medium of exchange and measure of value, and to reduce the general money standard of the Union nearly 1⅝ per cent., the difference in value between the former and the present dollars of account.

EARNEST, the delivery at the time of entering on a contract by one of the contracting parties to the other, of some portion of the matter or consideration of the contract, in token that it is finally agreed upon between the parties. Thus, the person whose part in the contract it is to pay, gives a small sum, and the person whose part it is to convey goods, gives a small portion of the goods in question. A common instance is in the case of hired servants who receive a small sum or portion of wages as earnest. By the statute of frauds (29 Ch. II. c. 3, § 17), no contract for the sale of goods or merchandise in England to the extent of £10 is good without a written memorandum, unless the buyer receive part of the goods, or give something in earnest or part payment.

EARTHENWARE, a term generally applied to all utensils composed of earthen materials. In reference to chemical constitution, there are two kinds: *Porcelain*, consisting of a fusible earthy mixture, along with an infusible, which, when combined, are susceptible of becoming semi-vitrified and translucent in the kiln; and *Pottery*, an infusible mixture of earths, which is refractory in the kiln, and continues opaque. The latter comprehends several sub-species, which graduate imperceptibly into each other, as stoneware, earthenware proper, flintware, fayence, delftware, and ironstone china. The term pottery, however, is sometimes applied distinctively to the brown stoneware, made into jugs and other articles, porous vessels, and the red pans and pots in common use.

The formation of earthen vessels is an art of the very highest antiquity; and it is one which probably was carried to greater perfection than any other of the manufactures of the ancient world. It is also one which has been found in a considerable degree of forwardness in all newly discovered countries possessing the raw material,—even among people comparatively rude and unacquainted with most of the other arts which conduce to human convenience. In China, it was carried to very nearly the degree of excellence which their porcelain now exhibits many centuries before it was practised with much skill in Europe. From Asia it was brought to Greece, especially Corinth, the potters of which displayed such exquisite taste and skill, that their works were amongst the most valuable decorations in the dwellings of princes. The Greeks introduced their improvements into Egypt; and a Phœnician colony is supposed to have founded the ancient Etruria, whence modern Europe has drawn models of skill and beauty.

The Romans improved the art of pottery in this and many of the other countries which they conquered; but the manufacture, nevertheless, continued stationary until a comparatively recent period, and the wealthy were supplied with porcelain almost exclusively from China. At length, however, the royal establishments of Sèvres, Dresden, and Berlin, produced wares which became the admiration of Europe; yet they never circulated throughout all ranks, nor effected any general change in domestic life, being limited to the use only of the noble and the rich.

In England, the manufacture of earthenware has been established from the remotest period of history, particularly in Staffordshire, where indeed the Romans are said to have had potteries; but until the beginning of the eighteenth century, it was confined to a few objects of the commonest description. In 1690, various improvements were introduced by two brothers, named Elers, who came from Nuremberg; and about 30 years later, a person called Astbury first made white stoneware, by the adoption of calcined flints in its composition. This step was of consequence in preparing the way for the far greater advances afterwards (1760) accomplished by Mr Josiah Wedgwood (born 1730, died 1795), by whose discoveries and exertions the wares of Staffordshire were not only brought into general use in this country, to the exclusion of all foreign goods, but English pottery has since been sought for throughout the civilized world, and adopted even in places where the art was formerly prosecuted. "Its excellent workmanship, its solidity, the advantage which it possesses of sustaining the action of fire, its fine glaze impenetrable to acids, the beauty and convenience of its form, and the cheapness of its price, have given rise to a commerce so active and universal, that, in travelling from Paris to Petersburg, from Amsterdam to the furthest part of Sweden, and from Dunkirk to the extremity of the south of France one is served at every inn with English ware. Spain, Portugal, and Italy are supplied with it; and vessels are loaded with it for the East Indies, the West Indies, and the continent of America."*

The district in Staffordshire wherein the English earthenware is chiefly manufactured, distinguished by the general appellation of "The Potteries," is situated on the borders of Cheshire, commencing at the village of Golden Hill, and extending more than seven miles to Lane End, and comprising the intermediate places of Newfield, Smithfield, Tunstall, Longport, Burslem, Cobridge, Etruria (the seat of Mr Wedgwood's establishment), Hanley, Shelton, Stoke, Lower Lane, and Lower Delf. These were all formerly distinct villages, but the increase of the manufacture has led to the erection of so many new works, that their individuality is now lost, and the whole presents the appearance of one large town. The manufacture in England, however, is far from being restricted to Staffordshire. Porcelain has long been made at Derby and at Coalport in Shropshire, while more lately it has risen to high excellence in the city of Worcester, at Rockingham, and at

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* Travels in England and Scotland by E. Faujas de Saint Fond, vol. i. p. 97.

Swinton near Rotherham. The Lambeth stoneware is perfect in its kind; and establishments for making the commoner sorts are to be found in many parts of the kingdom.

"The better kind of pottery, called in this country Staffordshire-ware, is made of an artificial mixture of alumina and silica; the former obtained in the form of a fine clay, from Devonshire chiefly; and the latter, consisting of schist or flint, which is heated red-hot, quenched in water, and then reduced to powder. Each material, carefully powdered and sifted, is diffused through water, mixed by measure, and brought to a due consistency by evaporation; it is then highly plastic, and formed upon the potter's wheel and lathe into various circular vessels, or moulded into other forms, which, after having been dried in a warm room, are enclosed in baked clay-cases, resembling bandboxes, and called *seggars;* these are ranged in the kiln so as nearly to fill it, leaving only space enough for the fuel; here the ware is kept red-hot for a considerable time, and thus brought to the state of *biscuit.* This is afterwards *glazed*, which is done by dipping the biscuit-ware into a tub containing a mixture of about 60 parts of litharge, 10 of clay, and 20 of ground flint, diffused in water to a creamy consistence, and when taken out, enough adheres to the piece to give a uniform glazing when again heated. The pieces are then again packed up in the seggars, with small bits of pottery interspersed between each, and fired in a kiln as before. The glazing mixture fuses at a very moderate heat, and gives a uniform glossy coating, which finishes the process, when it is intended for common white ware.

"The patterns upon ordinary porcelain, which are chiefly in blue, in consequence of the facility of applying cobalt, are generally first printed off upon paper, which is applied to the plate or other article while in the state of biscuit; the colour adheres permanently to the surface when heat is properly applied.

"The manufacture of porcelain is a most refined branch of art; the materials are selected with the greatest caution, it being necessary that the compound should remain perfectly white after exposure to heat; it is also required that it should endure a very high temperature without fusing, and at the same time acquire a semivitreous texture, and a peculiar degree of translucency and toughness. These qualities are united in some of the Oriental porcelain, or China, and in some of the old Dresden, but they are rarely found co-existent in that of modern European manufacture. Some of the French and English porcelain, especially that made at Sèvres and at Worcester, is extremely white, and duly translucent, but it is more apt to crack by sudden changes of temperature; more brittle, and consequently requires to be formed into thicker and heavier vessels; and more fusible than the finest porcelains of Japan and China." (*Brande's Chemistry.*)

The annual value of the manufacture in this country may be estimated at £2,500,000, about two-thirds of which is produced in Staffordshire; and nearly the whole of this large amount consists of the labour and skill bestowed on the goods, as the value of the raw material is trifling. This manufacture is besides distinguished by other peculiarities. The Potteries' district being situated in one of our most inland counties, occasions the employment of an immense quantity of inland carriage by canals and otherwise, both for the raw materials and finished goods; while every ton of the former produces several tons of merchandise for shipping, the freight being paid, not upon the weight, but according to the bulk; and scarcely a vessel leaves any of our great ports, whose lading is not in part made up of these cheap, bulky, and, for these reasons, valuable articles, to this maritime country. The total declared value of the goods annually exported is now about £700,000; but the real value is said to be about one-fourth more. Nearly one-half of these shipments is to the United States; the remainder is diffused pretty equally over all the other portions of the globe with which Great Britain has trading relations. [PORCELAIN.]

EASTERN OR MALAYAN ISLANDS, an archipelago lying betwixt the continents of Asia and Australia, and stretching from the W. extremity of Sumatra to the island of Papua or New Guinea; nearly all of them, with the exception of the Philippines, being situated within 10 degrees of the equator on each side. Among them are 2 islands of the first rank and size, viz.: Borneo, and Sumatra; of the second rank, Java; of the third, Celebes, Luzon, and Mindanao; and of the fourth rank, Bali, Lombok, Sumbawa, Jindana, Flores, Timor, Ceram, Booro, Gilolo, Negros, Samar, Mindoro, Panay, Leyte, and Zebu. The smaller ones are numberless. Population vaguely estimated at 15,000,000.

The Eastern or Malayan Islands are the only portions of Asia situated under the equator, and, like other tropical countries, enjoy heat, moisture, and a luxuriant vegetation. They are throughout of a mountainous nature, and the principal chains volcanic. There is a general uniformity in climate and in productions; but on a closer view it is found that the western and eastern divisions possess distinct characters. In the western division, the productions are of a higher order of utility, and rice forms the principal food of the inhabitants. The eastern is less fertile, and the inhabitants derive their chief sustenance from the pith of the sago tree. The portion of the latter, however, betwixt long. 124° and 130° E. excels in the finer spices; and in this part the character of the monsoons is reversed; the easterly monsoon being here rainy and boisterous, and the westerly, dry and temperate. There are two aboriginal races of inhabitants in the archipelago; a brown people, with lank hair, inhabiting chiefly the W. division; and a negro race, black, with frizzled hair, inhabiting chiefly the E. division; the former displaying nearly the same superiority over the latter that the whites do over the negroes of Africa. The women of these islands, more especially of Java, are, on shore, almost the sole merchants and brokers, the men interfering little, particularly with retail business. The Wadjo-Buggesses are the chief carriers of the archipelago.

The higher departments of commerce are conducted by foreigners, mostly Chinese, Europeans or their descendants, and natives of India and Arabia. Of the Asiatic traders, the Chinese are by far the most useful, and appear to stand nearly in the same relation to the natives that the Jews did to the barbarians of Europe in the middle ages; the advantage in respect of treatment being, however, decidedly in favour of the former.

The Eastern Islands, and more especially the Moluccas, or Spice Islands, have, at different periods, been the subject of rivalry and contention among the Portuguese, English, Spanish, and Dutch. The Portuguese having, by degrees, been shorn of their maritime power, and the attention of the English gradually absorbed by their immense empire on the continent of India, these islands (excepting the English settlements in the Straits of Malacca), have long been occupied only by the Spanish and Dutch. The Spanish possessions are the Philippines. The Dutch have entirely subdued Java, the Moluccas, and some others, and hold military occupation of leading positions throughout the archipelago, over the whole of which indeed, excepting the Philippines, they claim a kind of sovereignty. The Dutch possessions are divided into seven governments; Batavia with the seat of the governor-general, and Sumatra, Amboyna, Banda, Ternate, Macassar, and Timor. During the last war, the British deprived the Dutch of Java and their other principal settlements; but the whole were restored at the peace in 1815; and in 1825, Bencoolen and the other British settlements in Sumatra were exchanged with the Dutch for Malacca. Java, while in possession of the British, was materially improved, and its restoration has ever been matter of regret, both on account of the intrinsic value of the colony itself, and of the admirable situation of its capital, Batavia, as an emporium for the whole archipelago.

Gold is universally diffused throughout the Eastern Islands, and in 1818 the total produce, including that of the Malay peninsula, was estimated at 154,815 ounces, or £658,176. It is most abundant in Borneo, then in succession in Sumatra, Celebes, and Luzon; silver, as an article of commerce, scarcely exists; iron is also rare; copper ores are found in Sumatra, Timor, and at Sambas in Borneo. Banca possesses tin mines which appear to be inexhaustible; they are worked by Chinese employed by the Dutch. Of late years the supply of tin from these mines has been greatly augmented, and, after fully supplying the markets of India and China, a large quantity is annually exported to Europe, where it has lessened the demand for Cornish tin. On the south and west coasts of Borneo the diamond is found. The vegetable productions are of the most varied description, many of them are common to all tropical countries, but not a few are peculiar to these regions alone. Java is accounted the rice granary of the archipelago, and it besides produces coffee and sugar in large quantity, with some indigo. Black pepper is produced in greater abundance in Sumatra, particularly the west coast, than in all the rest of the world. The nutmeg exists throughout almost the whole of the Moluccas; but the avaricious policy of the Dutch has been nearly successful in confining it to the small group of the Bandas, and the clove to the island of Amboyna, where they are both preserved as government monopolies. The chief other productions of these islands and the adjoining seas are timber, bamboos, rattans, antimony, camphor, benzoin, tripang, bird-nests, shark-fins, and tortoise-shell. The fisheries are valuable, particularly in the seas of the western parts of the archipelago.

The commerce of the Eastern Islands is considerable. An intercourse has always subsisted with the remote maritime nations of Asia, but the most extensive has always been with China. The intercourse with Europeans is effected chiefly through the medium of Batavia and Singapore, the two great emporiums of the Eastern Islands. The imports received from China in exchange for the productions of the archipelago consist principally of tea, cotton stuffs, and porcelain, all of inferior quality; and from Europe, cotton manufactures, particularly chintzes of moderate fineness and gaudy patterns, white cottons, cambrics, and imitation bandanas; also light cheap woollens of showy colours, and low-priced glassware, mirrors, and earthenware. Under the heads JAVA, SINGAPORE, and PHILIPPINES, a fuller account is given of the islands more particularly under European influence. The chief other islands, with their ports or towns, are the following:

SUMATRA. *Dutch Towns.*—Palembang, Padang, Bencoolen. *Native Towns.*—Acheen, Soosoo, Deli, Asahan, Bacoungan, Tappunooly, Rawa, Natal, Ippoo, Ayrpoor, Manna, Kawur, Croee, Tulang Bawang.

BORNEO. *Dutch Towns.*—Sambass, Pontiana. *Native Towns.*—Borneo, Montradok, Mampawa, Banjarmassin, Pasir Town.

CELEBES. Macassar, Kema, Gounong Tela, Bool, Palos, Waja Tannete, Mero, Boola, Comba.

SOOLOO ISLANDS. Sooloo.

MOLUCCA, OR SPICE ISLANDS; Ceram, Amboyna, Banda, Ternate, Goram, Gilolo, Tidore. *Principal Dutch Town.*—Amboyna, in the island of that name.

The *weights* chiefly employed throughout the Eastern Islands are those of China. The *currency* used by merchants is commonly the Spanish dollar, but in Java the Netherlands florin.

The moral and political condition of the inhabitants of the Eastern Islands has been much deteriorated by the evil effects of European influence as exercised by the Dutch; and by their continued turbulence, owing to the defective power of the sovereign, the ill-defined succession to the throne, the universal prevalence of piracy, and the inefficient protection of commerce and consequent monopoly of trade by the petty chiefs, with all their arbitrary dues and extortions.

EAST INDIA COMPANY, an association originally formed for the sole purpose of trading to Hindostan and the neighbouring regions; but who, by a peculiar combination of circumstances, have established themselves as the sovereigns of an immense empire, extending over the principal part of those countries, and containing upwards of 100 millions of people.

From the first dawn of maritime enterprise in Britain the trade of India was contemplated as its grandest object. Into the sanguine conceptions formed on this subject there entered, no doubt, a considerable degree of illusion. Yet there were circumstances which, even at that early stage of mercantile adventure, threw a peculiar lustre on the trade of India. The staple articles consisted of finer and richer fabrics than any that had yet been produced in the West; diamonds, pearls, jewels the most beautiful and brilliant; also spices the most fragrant and grateful to the senses. The great scale, too, on which operations were conducted, and the large fortunes accumulated in certain instances, gave to this traffic a character of grandeur not belonging to the smaller transactions which took place within the limits of Britain or of Europe.

The exclusive right to the navigation to India by the Cape of Good Hope was claimed by the Portuguese, the original discoverers of the route in 1497, and then the most powerful maritime state. This claim being sanctioned by the Pope, and somewhat in unison with the laws generally admitted in that age respecting maritime discovery, the early attempts of the English to participate in the Indian trade were directed first to the exploring of a passage by the N. W. coast of Asia; and next to the opening of an intercourse with India across Russia and Persia; and under Willoughby, Chancellor, and others, much capital and enterprise were expended in vain on these arduous undertakings (1528, &c.). The next attempts were made by Cabot and others by the N. W. passage round the arctic shores of America; but the results were alike unsuccessful. At last Drake conceived the bold design of penetrating into the South Sea; and, having equipped a fleet, he accomplished a passage through the Straits of Magellan, and arrived in 1579 at the Moluccas, where he first began that commerce with India which has since been carried to so great an extent. Drake's return to England in 1580 was hailed with exultation by the people; and his success encouraged Cavendish and other commanders to tread in his footsteps, while another route, projected by the Mediterranean and Persian Gulf, was accomplished by a different body of adventurers, including Newbery and Fitch, in 1584 and 1585. Meanwhile, England having risen to the first rank among maritime states, the awe inspired by the power of the Portuguese became materially lessened; and in 1591, three ships were despatched under Lancaster and others by the Cape of Good Hope. He visited Sumatra, Penang, Ceylon, and neighbouring places, and returned in 1594; but the issue of this expedition was, upon the whole, unfortunate, and for some time chilled the ardour of the English. On learning, however, that the Dutch had sent out four vessels, they were again inspired with emulation, and an association, formed in 1599, subscribed £30,000 to be employed in fitting out three ships for the Indian trade. This body in 1600 merged into one on a grand scale, having at its head George, earl of Cumberland, with 215 knights, aldermen, and merchants, who constituted the "Governor and Company of Merchants trading to the East Indies."

The Company received a charter for 15 years from Queen Elizabeth, and were invested with the ample privileges which it was then customary to bestow on mercantile associations. They began on the footing of a joint-stock company, though, as the subscribers were slow in paying up their shares, a certain number of the more zealous took the concern altogether into their own hands. They expended £75,373, of which £39,771 were invested in shipping, £28,742 in bullion, and £6860 in goods. It was the wish of the court that Sir E. Michelborne should be commander; but the merchants intimated their resolution not to employ gentlemen, "but to sort their business with men of their own quality." They accordingly appointed Lancaster, who sailed, 2d April 1601, with five ships, varying from 130 to 600 tons; and after visiting Acheen in Sumatra, and Bantam in Java, returned in 1603. Betwixt 1603 and 1612, seven other voyages were undertaken, making in all eight expeditions, the result of which was judged, on the whole, to be prosperous. The commanders of these expeditions appear, like most of the early navigators, to have sometimes conjoined the different occupations of trade and piracy. Their principal object was to obtain pepper, cloves, nutmegs, and other spices in the Eastern Islands, their chief settlement being Bantam; and the continent of India was not visited until 1611, when Middleton reached Surat. In 1612, the Mogul allowed them to establish factories at Surat, Ahmedabad, Cambay, and Gogo. Shortly afterwards, a regular annual intercourse with India was established, chiefly at Surat; and the most valuable possessions in the Eastern Islands having been wrested from the Portuguese by the Dutch, were less visited, until at length the greater attractions of the continent induced the Company gradually to relinquish all their insular stations except a few in Sumatra. The factory at Surat remained their chief seat on the western coast until 1687, when the presidency of the other settlements was transferred to Bombay, an island which had been obtained by Charles II., in 1662, as the dowry of the Infanta Catherine of Portugal. The Company's trading stations on the E. or Coromandel coast were held subordinate to Bantam until 1640, when they obtained the permission of a native chief for the erection of Fort St George at Madras; which place was formed into a presidency in 1654. The establishment in Bengal was founded somewhat later than the others. In 1656, through the influence and patriotism of a physician named Boughton, who had been professionally useful to the Nabob of Bengal, permission was obtained to erect a factory at Hoogley, on the Ganges. From this time ships were sent to Bengal every year, but its commerce was still considered secondary to that of Coromandel, and made subject to the presidency of Fort St George. Calcutta was purchased in 1698; and in 1707 it was raised into a separate presidency.

The Company, for some time, were little more than an associated body of private adventurers; the governor and directors merely receiving the funds contributed by each individual, managing them according to his suggestion, and accounting to him for the proceeds. But in 1612, by representing the complexity and inconvenience arising out of this arrangement, they prevailed upon the merchants to unite into a joint-stock company, where the whole sum subscribed was placed under the control of the directors; and a dividend made, conformable to the general results of the trade. It has been alleged, however, that when zeal was no longer stimulated by individual advantage, the transactions were not conducted with the same economy, and yielded less advantageous returns. The Company afterwards involved their affairs in the confusion of different interests. An addition to their capital being from time to time required, was procured by a new joint stock, and sums were subscribed by fresh bodies of adventurers, which were to be separately managed. Thus by the year 1650, four distinct subscriptions were formed. Meantime, the directors were harassed not only by the competition of interlopers, but by demands from respectable merchants to be admitted to a share of this lucrative traffic. The principles of commercial as well as of political liberty widely pervaded the nation; the Levant and Muscovy trades had been thrown open with the happiest effects; and it was urged that equal benefits would accrue from opening to the nation in general that of India. In 1635, a new association, headed by Sir W. Courten, obtained permission from the king, who was allowed a share in the adventure, to embark in an independent trade with that country. The concern, however, was not well conducted, and could not make head against the hostility of the Company. At length the privilege was withdrawn; but the directors agreed to incorporate the capital with their own, forming what was termed the United Joint Stock. Its proprietors, however, were in 1655 empowered by Cromwell to resume a separate commerce. Jealousies were roused to the highest pitch; and after several warm discussions, it was agreed that the exclusive system should be fully re-established, and that the different stocks which had led to such confusion should be consolidated. From this time the transactions were carried on, if not in a more profitable, at least in a more systematic manner. A charter granted to the Company in 1661 authorized them "to make war or peace with any prince or people that were not Christians."

During a course of years from this date, though the Company laboured under embarrassment, the prosperity of the country enabled them to extend their commerce. Their outward investment in goods and bullion, which in 1622 did not exceed £65,000, rose in 1673 to £228,000. This apparent success produced the usual effect of exciting emulation among the rest of the community; and the project of a new joint stock was (1683) for some time entertained. The Company, notwithstanding, had still influence enough in 1693 to procure from the crown a charter for 21 years, which authorized them to extend their capital from £756,000 to £1,500,000; but the House of Commons, in the same year, passed a vote directly annulling this grant. In 1698, a bill was brought into Parliament for the establishment of another company. This measure was not, however, founded upon a liberal basis. It in no degree threw open the trade, but merely transferred the monopoly from one body to another, and a direct injustice was committed by allowing the new association to commence their operations immediately; their predecessors being by their charter entitled to a notice of three years before their exclusive trade should cease. Finally —and this was the real source of their too ample privileges—the new company agreed to advance to government £2,000,000 at 8 per cent. Their means being thereby crippled, they were only able in their first voyage to complete an investment of £178,000, while their rivals sent out one of £525,000. The old company also conducted their affairs with increased prudence; and by their great experience proved themselves superior to their new competitors. The most violent dissensions broke out in India between the rival associations, each representing the other in the blackest colours to the native princes, who were much disposed to listen to the statements of both. Hence arose an apprehension that the very existence of British trade in India was in peril; and a sense of mutual danger induced the companies to agree, in 1702, to a compromise, and to act thenceforth under the title of "The United Company of Merchants trading to the East Indies." Godolphin was appointed arbiter, and on the basis of his decision was formed a government composed of a Court of Proprietors for general purposes, and a Court of Directors for details. Seven years were allowed for each company to wind up its affairs, at the end of which period (1708), the act 6 Anne, c. 17, was passed, prolonging their charter to 1729, and obliging the United Company to advance £1,200,000 to government without interest, which, when added to the former loan at 8 per cent., raised the amount to £3,200,000, and reduced the rate to 5 per cent. upon the whole advance. This act may be regarded as the foundation of the privileges of the present Company.

The exports, in the early part of the 18th century, consisted chiefly of bullion; and the imports of Indian silks, piece goods, and other products. An intercourse with China was opened so early as the year 1635; but the trade was long prosecuted irregularly, and on a very limited scale. In 1678, the Company possessed factories at Taywan in Formosa, and at Amoy. At this period the chief imports from China were silks and porcelain, and tea did not become the principal commodity until 1706, previous to which time they had been forced to restrict their intercourse to Canton. In 1715, the intercourse with the Chinese assumed the character of a regular trade, and ships were despatched from England at stated seasons, having each a supercargo to conduct the sales and purchases.

In 1709, the Company's dividend was 8 per cent., which was increased in 1711 to 9 per cent.; and in 1712, the charter was again extended to 1736. In 1716, the dividend was increased to 10 per cent., but reduced in 1722 to 8 per cent. In 1730, a strenuous effort was made by petitions from the chief mercantile towns to have the Indian trade thrown open; but the Company defeated this application, and procured a further extension of their charter for 33 years, to 1769, on which occasion they gave £200,000 to the public, and agreed to reduce the interest on their debt to 4 per cent. In 1743, they advanced £1,000,000 to government at 3 per cent., and obtained an extension of their charter from 1769 to 1783. When a general reduction of the interest on the public debt took place in 1749, that of the whole debt of £4,200,000 was reduced to 3 per cent., and they were empowered to borrow, by the sale of annuities to that extent, and did borrow £2,992,440 accordingly.

At this time (1749), the circumstances of the Company underwent a most important change. At first they attempted nothing more than to maintain factories for the accommodation of their agents, and places of deposit for their goods. The marauding character of the native princes afterwards rendered it necessary to fortify these stations. But though some passages in the Directors' correspondence in 1689 indicate a desire to make territorial revenue one of the Company's sources of emolument, yet down to 1749 they had acquired only a few small districts around Bombay, Madras, and Calcutta. The war which then broke out in the Carnatic had the effect of converting them into a military power, and of rendering them, after various struggles, virtual sovereigns of that part of the country. Much more memorable results arose out of the war in Bengal, and the victories of Clive, in 1757, when they obtained the Dewannee, including the real occupancy of that province, with Bahar and Orissa, forming a territory more extensive, and at that time supposed more opulent, than the whole of Great Britain. The sovereignty of these territories having been confirmed to the Company by treaty in 1765, an extraordinary sensation was created, and both themselves and the nation became inspired with an extravagant idea of their wealth; their stock rose to 263, and a dividend was voted of 12½ per cent. These treasures, however, soon became an object of jealousy and desire, both to the people and the government. The question was mooted whether any body of subjects could exercise an authority independent of the supreme power; nor were ministers slow to pronounce that the king must be the real and only sovereign over every territory conquered by the British arms. This alarming claim was, for the time, evaded by an agreement made in 1767, that the Company should annually pay £400,000 into the Exchequer, and reduce their dividend to 10 per cent.; upon which they were allowed for two years to retain their Indian acquisitions. In 1769, a similar arrangement extended their power five years longer; but at this epoch a disastrous crisis had arrived in their affairs. The revenues of the conquered provinces, though very considerable, were found inadequate to defray the expenses of the war with Hyder Ali, in which they were then engaged, and to meet the rapacity of their servants, and the exorbitant dividends which the proprietors thought themselves entitled to demand. Their affairs were now (1772) in a state of extreme embarrassment, which they in vain endeavoured to mitigate by loans from the bank, first of £400,000 (July 15), and then of £200,000 (July 29). They were under the necessity of stating to government (10th August 1772) their absolute want of an accommodation to the amount of £1,500,000. This application placed them entirely at the mercy of the minister, who determined, indeed, after some hesitation, to grant their request, but under conditions which might promote both his own influence and that of the crown. His terms were, that the Exchequer should lend £1,400,000 at 4 per cent., and forego the stipulated annual payment of £400,000 till that debt were discharged. In return, the Company were not to divide above 6 per cent. till that object should be accomplished; and on their extrication from difficulties, were to pay to the revenue three-fourths of their surplus receipts at home. The latter point was loudly denounced by the Directors as oppressive; but, in fact, it proved wholly nugatory, since the relief from embarrassment and the possession of a surplus were never realized. The minister followed up this measure by another still more offensive, regulating their constitution, both at home and in India,—in particular, requiring the appointment of a governor-general, with four councillors, and a chief-justice with three judges, subject to the approbation of the cabinet. The remonstrances of the Company against this measure were fruitless, and the arrangements were carried into effect by two acts passed in June 1773.

The debt to government was discharged in 1777, when the restriction on their dividends was of course removed; and in 1781, a new agreement was made, by which £400,000 were accepted by government in discharge of all former claims, and the charter extended to 1794. The dividend being at that time 8 per cent., it was also stipulated that a certain share of the surplus profits should accrue to the public; but the state of the Company's affairs rendered the latter provision of no value.

Meanwhile the Directors were actively endeavouring to repress the disorders which began to appear in their Indian possessions. It was with this view chiefly that Clive went out a second time in 1765, though circumstances soon afterwards led also to a vast extension of their territorial property. The two primary objects of his mission were to put an end to the exaction of presents by British officers from the native powers, and to repress the internal trade, in a great measure monopolized by them, which had been the source of accumulated evils. The first of these measures he enforced with rigour. The latter, however, he is said to have partially connived at, till the repeated commands of the Directors left him no choice but to perform his duty. Affairs, nevertheless, remained in extreme disorder; and the revenue had, in no degree, answered the expectations of the Company. On the resolution being formed to appoint a governor-general, Parliament nominated Warren Hastings. The choice was entirely approved by the proprietors; and from that gentleman's splendid talents and great experience in Indian affairs, the happiest results were expected from his elevation to the supreme government. His administration lasted from 1772 to 1785; and the various transactions by which it was marked excited in Britain a very intense interest, and gave rise, after his return, to some of the most memorable proceedings in the records of Parliament, though they did not permanently affect either the extent of the British power, or its relation to the native states. During Mr Hastings' government, the revenue had been somewhat increased, but the debt had been augmented in a greater proportion. This, however, had resulted from the wars in which the Company were involved, particularly that with Hyder, to which Mr Hastings could scarcely be considered a party. The violent clamour against him led to his impeachment before the House of Lords, and his trial lasted from 1788 to 1795, in the course of which it appeared that, if he had not been free from blame, it was evident that the magnitude of his offences had been considerably exaggerated: the sentence of "not guilty" was finally passed in a thin house upon all the charges; and the Company granted him a considerable pension.

The affairs of India had meantime been made the chief ground of debate in Parliament betwixt the two great political parties. Mr Fox having obtained an ascendency in Parliament, brought in his memorable bill, by which nearly the whole government and patronage of India would have been taken from the Company, and vested in the Commons. It was passed without difficulty in that house; but through the influence of the king, it was rejected by the Lords. Mr Pitt obtained office shortly afterwards, and by means of his exertions an act was passed in 1784, which made a material change in the administration of India, by the establishment of a new body, invested with high powers, called the *Board of Control*, the functions of which will be immediately explained. The act contained very strict injunctions for the remedy of the evils whence the Company's embarrassments were supposed to have arisen; in particular, to renounce all schemes of war and conquest, declaring that "schemes of conquest and extension of dominion in India, are measures repugnant to the wish, the honour, and the interest of this nation." In order to fulfil the objects of the act, Lord Cornwallis was appointed governor-general in 1786. Animated by the purest patriotism and integrity, and endowed with a sound judgment, he perhaps did not possess those comprehensive views which form the complete statesman. In undertaking to place on an improved basis the financial and judicial systems of British India, he was guided by motives decidedly benevolent. But his arrangements in some cases proceeded on a very imperfect knowledge of the actual state of the country; and he applied principles founded upon abstract theory and English practice to a people in whom local prejudices had taken deep root. The sanguine expectations formed from his administration were therefore in a great measure disappointed. He was desirous, in conformity with his instructions, to abstain from aggression and conquest in every form, yet he allowed himself, on somewhat slender grounds, to be drawn into hostilities with Tippoo, which added a considerable part of Mysore to the Company's possessions, and laid the foundation for other conquests on a still greater scale. The result, on the whole, has been, that, instead of "conquest and extension of dominion" being abandoned, it was from this time that, in the mode of acquiring territory, the Company dispensed with mercantile intrigue, and began to assume more of a purely military character.

In 1793, the charter was renewed (33 Geo. III. c. 52) for 20 years. In the same year, the public debt of £4,200,000 due to the Company was joined to the 3 per cent. stock; but as £2,992,440 of this debt had been previously sold, they became holders to the extent of the balance only, viz. £1,207,560, which last sum was not paid up until some years afterwards. At this period their revenues amounted to £8,225,628, the expenditure to £7,007,050, thus yielding a surplus of £1,218,578; and the debt was reduced to £7,971,665. This state of affairs became the subject of vehement declamation in Parliament and elsewhere; and the Act, after directing payment of a dividend of 10 per cent., with ½ per cent. more eventually from a separate fund, and providing a sinking fund of £500,000 per annum, gravely appropriated an equal amount to be annually paid into the British Exchequer; besides contingent sums of "surplus profits," which were to be applied in a similar manner. It may be almost superfluous to state that these golden dreams were never realized. The hostilities against the French, which commenced in 1793, led to their being entirely stripped of their Indian settlements; but though annihilated as a separate party, they continued to intrigue with the native princes, particularly Tippoo. This led to the Mysore war of 1799, the destruction of that sultan, and the complete breaking up of his territory. In 1802, the Mahratta war commenced, the most important of all in which the Company have ever been engaged. Amidst these extended operations, the surplus of revenue soon disappeared; and it was not found convenient to make more than two payments of £250,000 each to the public, in the years 1793 and 1794. In 1797, a deficiency occurred, which continued till 1811, although, by the extension of territory in the interval, the revenue had increased from about 8 to 15½ millions sterling. In 1810, the Company obtained temporary assistance from the public, by the advance of £1,500,000 in Exchequer bills. They again received accommodation in 1812, by a loan of £2,500,000: this last was liquidated by annual payments, and finally discharged in 1822.

In 1808, the Company began to grant licenses to the owners of Indian vessels, or "country ships," to trade between India and China. This traffic, which was conducted quite distinct from the transactions of the Company, soon became of considerable importance. The exports of the country traders, consisting chiefly of opium and cotton wool, considerably exceeded in value their imports in return; while, on the other hand, the shipments of tea by the Company were of much greater value than their outward investment. The balance was therefore adjusted through the country traders, by means of bills drawn by the Company's servants at Canton upon the Bengal government, and to a small amount also on the Court of Directors in London. Previous to the great extension of the country trade, the tea was principally paid for with bullion exported from England,—the export of goods, which principally consisted of woollen cloths, with a small quantity of iron, being wholly inadequate to that purpose.

In 1813, the act 53 Geo. III. c. 155, was passed, which renewed the charter for a period of 20 years, from April 22, 1814. By this statute the trade with India was thrown open to the public under certain regulations; while that to China, and the tea trade generally, was reserved exclusively to the Company. At the same time, the territorial and commercial branches were separated, as well as all accounts connected with them. During the 20 years embraced by the charter, there occurred the Nepaulese war, 1814 and 1815; the Pindaree war, 1817 and 1818; the Burmese war, from 1824 to 1826; besides others on a smaller scale, including Bhurtpore in 1826. Most of these operations led to an enlargement of territory, and consequently to an increase of revenue, but likewise, as before, to a corresponding amount of expenditure and debt; during the Burmese war alone the debt being augmented by the sum of £13,007,823.

Before the trade to India was thrown open in 1813, it was confidently stated, in a report which the Directors forwarded to the Board of Control, "that all the expectations then entertained by British merchants as to the wished for opening of the Indian trade were groundless and delusive; that those who should act upon them if the trade were opened, would be sure to experience ruin, loss, and disappointment; and that the abolition of the Company's commercial privileges would be in effect the extinction of the whole of the present Indian system." Nothing daunted by this statement, the merchants at once entered into the new trade with spirit, and the following table, showing the progress of both parties, well illustrates the effects of the change:—

Declared Value of the principal Exports from Great Britain to all places Eastward of the Cape of Good Hope (except China), in the Years 1814, 1823, and 1832, distinguishing the Private Trade from that of the East India Company.

	1814.		1823.		1832.	
	Company.	Private.	Company.	Private.	Company.	Private.
	£	£	£	£	£	£
Beer and ale	434	49,588	....	97,188	....	87,606
Copper, wrought & unwrought	23,962	28,638	90,055	68,169	11,180	178,036
British cottons	17,778	91,702	....	1,128,468	268	1,531,125
Cotton twist and yarn	....	7	....	16,993	12	309,719
Glass	2,983	65,460	1,486	122,167	1,060	100,087
Hardware and cutlery	11,720	15,163	6,087	76,176	11,264	71,025
Iron, wrought and unwrought	93,245	69,836	36,402	132,559	3,012	141,681
Linen manufactures	17,167	6,267	1,894	19,130	5,341	43,715
Silk manufactures	246	18,079	29	25,742	45	25,159
Wines	11,297	260,882	1,328	115,997	308	149,949
Woollen manufactures	235,151	20,213	85,649	221,489	37,801	199,708
Other articles	412,575	422,297	235,620	933,627	78,902	763,283
Total	826,558	1,048,132	458,550	2,957,705	149,193	3,601,093
	£1,874,690		£3,416,255		£3,750,286	

The preceding table shows, that notwithstanding the great reduction in the prices of most of the commodities which make up our export trade with India, the value of the shipments was doubled within the 18 years from 1814 to 1832, while in British cottons, twist, and yarn, the increase was eighteen fold; an increase the more worthy of notice as occurring with regard to a species of manufactures for our supply of which we were not many years before dependent upon the looms of Hindostan. In comparing the Company's with the private trade, it will be observed, that while the former progressively decreases, the latter rapidly increases. Indeed, as the Company's exports include military stores as well as merchandise, it may be held to have virtually expired in the year 1825, in which year the value of the goods exported by them amounted to only £73,000. These results, viewed in connexion with the fact, that for not a few years prior to 1814 little alteration had occurred in their exports, showed conclusively that the increase was owing entirely to the activity of the private traders.

The unfitness of a large corporation like that of the East India Company to prosecute commercial dealings being now apparent, Parliament had little hesitation, when called upon to legislate on Indian affairs in 1833, in not only abolishing their monopoly of the China trade, but in preventing them from carrying on any mercantile operations whatever, and of restricting them to the administration of their vast territories. This change was effected by the three acts of 3 & 4 Wm. IV. c. 85, 93, and 101. The first is entitled An Act for effecting an Arrangement with the East India Company, and for the better Government of his Majesty's Indian Territories, till April 30, 1854; the second, An Act to regulate the Trade to China and India; and the third, An Act to provide for the Collection and Management of the Duties on Tea. The general amount of the provisions of these acts was to throw open, for the first time, the countries to which they relate, to British enterprise and capital. Down to 1813 both China and India were as completely shut against the people of this country generally, as if they had been hostile regions. The charter of 1813 diminished, to a certain degree, this restriction, by allowing the ships of private traders to resort to India, and, more recently, regulations of the Indian government permitted a limited extent of land for indigo plantations to be held in India by persons who were not natives; while trade was licensed by the Company between China and India. But much of this was upon sufferance, and no relaxation of the monopoly of the trade between China and England had ever been conceded.

Constitution and Present Condition of the Company.

The government of the East India Company's territories is composed of the Home Government and the Executive Government in India.

The Home Government consists of, 1*st*, The Court of Proprietors; 2*d*, The Court of Directors; 3*d*, The Board of Control.

The Court of Proprietors elect the Directors, and make by-laws, which are binding in all matters not regulated by Act of Parliament. General courts are held quarterly, in March, June, September, and December, at which no one can be present unless possessed of £500 stock; and the proprietors rate according to the amount which they possess. The lowest sum which entitles a proprietor to a single vote, is £1000 (of which he must have been in possession for the preceding 12 months, unless such stock was obtained by bequest or marriage); £3000, two votes; £6000, three votes; and £10,000, four votes. No greater number of votes can be given by any one proprietor. The number of proprietors lately entitled to vote was 1976; of which 54 possessed each four votes; 50 each three; 370 each two; and 1502 had single votes.

The Court of Directors consists of 24 proprietors, who are elected for four years; six going out annually by rotation. They are re-eligible, and generally are re-elected at the expiration of a year; thirteen form a court. The qualification for a seat in the direction is the possession of £2000 stock. The election takes place on the second Wednesday in April in each year. The Directors elect annually, from their own body, a chairman and deputy-chairman. The court conducts the whole affairs of the Company, subject to the superintendence of the Board of Control. They nominate the governors of the presidencies, subject to the approval of the crown. They can recall the governors, or any other of their servants, independently of the Board of Control. Such despatches as that Board consider should be secret, are forwarded to India by a *Secret Committee*, which usually consists of the chairman, deputy-chairman, and the senior member of the court. These all take the oath of secrecy, and form the channel through which are transmitted the orders and instructions of the Board on all matters relating to war or peace. The Directors are allowed an appeal from the Board of Control to the king in council; which, as Mr Mill observes, is little else than an appeal from the king to himself, and has never in practice been resorted to.

The Board of Control consists of six members, among whom must be the Chancellor of the Exchequer and a Secretary of State; one of which high officers, appointed to act as president, does in fact exercise nearly the whole power of the Board. Its functions are described in Mr Pitt's act of 1784, somewhat vaguely, in the following terms:—"From time to time to check, superintend, and control all acts, operations, and concerns, which, in any wise, relate to the civil or military government or revenues of the territories and possessions of the United Company in the East Indies." They are authorized to inspect all correspondence and despatches to and from India, and the proceedings of the Courts of Proprietors and Directors; also to have access to all documents belonging to the Company. They have the power to alter and amend the instructions which that body send out to their servants; and in certain special cases, as has just been noticed, can transmit orders directly through a secret committee of the Directors, who act as the mere channel of their communications. The Board of Control is now almost the sole governing power; they direct all the grand measures, nominate the commander-in-chief, and influence the other important appointments. They also possess by courtesy a large share of the general patronage; the president, who is a cabinet minister, is virtually secretary of state for India, and in Parliament is held accountable for the proper administration of the affairs of that country.

The Board of Control and Directors have, on the whole, worked together with a greater degree of harmony than might have been expected from an independent and ill-defined jurisdiction. It is admitted, however, that the details of Indian affairs have been generally administered by the Directors without vexatious or oppressive interference from the controlling authority.

The establishment of the Company in England, in 1835, comprised 494 persons, whose salaries and allowances amounted to £134,454.

THE EXECUTIVE GOVERNMENT IN INDIA is administered at the three presidencies, Bengal, Madras, and Bombay. In the first, the government consists of a governor-general and four councillors; and at the two others, of a governor and three councillors. The commander-in-chief is generally a member of council. The governor-general has a controlling power over the governors of Madras and Bombay. The making and enforcing of laws in the respective presidencies is vested in the governors in council, subject, in certain instances, to the consent of the supreme court of judicature, to register these decrees; and in all cases to the approval of the Board of Control and Court of Directors. Two systems of judicature exist in India,—the Queen's supreme courts, whose jurisdiction extends over Europeans generally, and affects the natives only in and within a certain distance around the several presidencies; and the Company's courts, in which there is a mixture of European and native judges.

THE COMPANY'S TERRITORIES.

The Company's dominions, besides the presidencies of Bengal, Madras, and Bombay, and the territories from time to time annexed to them by cession or conquest, comprise numerous tributary or protected states, the princes of which acknowledge the supremacy of the British government. According to the last edition of Mr Hamilton's Indian Gazetteer, the area and population of the whole, including the states in Hindostan still independent, are as follow :—

	Sq. miles.	Population.		Sq. miles.	Population.
Bengal Presidency	328,000	57,500,000	INDEPENDENT STATES.		
Madras Presidency......	154,000	15,000,000	Nepaul Raja	53,000	2,000,000
Bombay Presidency	11,000	2,500,000	Lahore Raja............	50,000	3,000,000
			Ameers of Sinde	24,000	1,000,000
			Dominions of Sindia......	40,000	4,000,000
			Cabul, east of Indus*....	10,000	1,000,000
Territories in Deccan, &c. acquired since 1815, mostly attached to Bombay Presidency........	60,000	8,000,000		177,000	11,000,000
	553,000	83,000,000	INDIA BEYOND THE GANGES.		
ALLIES & TRIBUTARIES.			*British Acquisitions in 1824 and 1825.*		
Nizam	96,000	10,000,000			
Nagpoor Raja..........	70,000	3,000,000			
King of Oude...........	20,000	3,000,000			
Guicowar	18,000	2,000,000			
Kotah, Boondee, & Bopaul..................	14,000	1,500,000			
Mysore Raja...........	27,000	3,000,000	Countries S. of Rangoon, consisting of part of Martaban and Tavay, Ye, Tenasserim, and Mergui Islands...........	12,000	51,000
Satara Raja............	14,000	1,500,000	Arracan...............	11,000	100,000
Travancore and Cochin..	8,000	1,000,000			
Other Rajas and Chiefs..	283,000	15,000,000	Assam and adjacent petty States	54,000	150,000
Total....	1,103,000	123,000,000	Total....	77,000	301,000

STOCK, FINANCES, &c.

The Capital Stock of the Corporation amounts to £6,000,000, of which there were subscribed, at the union of the two Companies in 1708, £3,200,000; in 1786, £800,000; in 1789, £1,000,000; and in 1794, £1,000,000. The act of 1833, while it determined that the government of the Indian territories should be continued to the Company until the 30th of April 1854, directed (as already noticed) that their trading privileges should cease from the 22d April 1834, that their commercial assets should be assigned to government for the purpose of discharging the territorial debt, and that, from the proceeds of the saleable effects, the sum of £2,000,000 should be taken, to be invested in the public funds, as a guarantee for the redemption of the capital stock.

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* Cabul may now be included under the protected or allied states.

The Security Fund thus created, consists of government 3 per cent. stock, which amounted, on the 5th July 1837, to £2,461,562, 16s. 8d.; composed of consolidated 3 per cent. annuities, £6841, 17s. 7d.; and reduced 3 per cent. annuities, £2,454,720, 19s. 1d., held in the name of the Commissioners of the National Debt.

The Dividend, annually payable to the proprietors, has been 10½ per cent. since Midsummer 1798; and this rate is secured to them under the new act. It was payable formerly out of the commercial assets of the Company only; but by the late act it is constituted a charge upon the territorial revenues of India. It is payable at the East India House half-yearly, namely, on the 5th of January and the 5th of July.

The Redemption of the Capital Stock may take place on or after the 30th of April 1874, at the option of the legislature, on payment of £200 for every £100 of stock; but it is provided, that in case the government of India should be taken from the Company in 1854, the redemption of the stock at 200 per cent. may be claimed by the Corporation.

The Debt of the Company consists of (1.) the India Bonds; and (2.) the Territorial Debt.

(1.) The "India Bonds" comprise the floating debt of the Corporation in this country; they are for sums of £100, £200, £300, and £500 each, and being payable half-yearly to the Company at par, they are commonly used in London (where they are constantly marketable) as an investment for money that is liable to be suddenly called for. The interest (always computed up to the day on which they are bought or sold) is payable at the East India House on the 1st of April and the 1st of October: its present rate is 3½ per cent. The amount of these bonds in circulation, prior to the last renewal of the charter, was about £3,700,000; but it has been since greatly reduced. In the year 1839-40, the annual charge on account of the home bond debt is stated at only £51,828.

(2.) The "Territorial Debt" in India amounted, on the 30th of April 1838, to £30,249,893, bearing, at various rates, interest amounting to £1,427,366 a-year. About one-fourth of this debt is held by natives. Only a portion of it is transferable in London, consisting of a 5 per cent. loan, the dividends on which are payable at the East India House, twelve months after they become due in India, at a fixed rate of exchange.

The Revenue and Expenditure in India for the last two years for which it has been published are as follows:

Revenues.	1837-38.	1838-39.*	Charges.	1837-38.	1838-39.*
Bengal..Co.'s rupees	7,22,27,200	7,10,03,108	Bengal..Co.'s rupees	6,69,15,428	7,93,93,069
Agra..............	3,34,20,136	4,06,61,737	Agra..............	77,98,714	86,29,471
Madras............	3,74,70,004	3,76,93,899	Madras............	3,22,36,136	3,28,81,619
Bombay............	1,75,89,877	1,61,30,278	Bombay............	2,08,52,805	2,07,01,110
Sum of Ordinary Revenues........	16,07,07,217	16,44,89,022	Sum of Ordinary Charges of India..	12,78,03,063	14,16,05,289
Equal in sterling £	15,066,302	15,420,845	Equal in sterling £	11,981,539	13,275,496
Extraordinary Receipts.			*Extraordinary Charges.*		
Bengal............	1,96,569	1,76,652	Bengal............	64,450	4,412
Madras............	14,703	485	Madras............	....	....
Bombay............	....	..	Bombay............	....	....
Rupees..	2,13,272	1,77,137	Rupees..	64,450	4,412
£ sterling..	19,994	16,606	£ sterling..	6,042	413
Total £ sterling..	15,086,296	15,437,451	£ sterling..	11,987,581	13,275,909
Deficiency in 1838-39.	....	453,923	Charges in England..	2,304,445	2,615,465
			Total Charges of India	£14,292,026	15,891,374
			Surplus in 1837-38..	794,270	....
£	15,086,296	15,891,374	£	15,086,296	15,891,374

The revenue of the Company is derived principally from the land, over which (as common in the East) it exercises the right of ownership, not by retaining actual possession, but by levying assessments which have been usually so calculated as to realize the greatest amount of rental that could be safely extracted from the cultivators. Formerly, the lands were held by the *ryots* or cultivators of the soil, whose right of perpetual occupancy was never questioned, but who were subject to the demands of their respective governments,—demands unlimited as to right, but limited in extent by custom. Different systems existed as to the mode of collection. In some places the rent or tax was collected in one sum from each village, which kept up a body of officers whose functions consisted in proportioning and levying the assessment according to the means of the ryots. In other cases, government appointed officers, who received charge of several districts, and who were remunerated by a per centage upon the amount collected. These functionaries were called *zemindars*, whence the plan acquired its name of the *zemindary system*. Their allowance formerly was one-tenth part of the collections; but in the year 1793, the Marquis Cornwallis, then governor-general, formed the resolution of placing the zemindars in the situation of proprietors, by fixing the assessment against them, and engaging not to raise at any time its amount. This arrangement, termed the *permanent settlement*, has been established through a great part of the presidencies of Bengal and Madras. It was hoped that by this means the zemindars would have been induced to improve their estates, since the whole increased revenue resulting from such improvements would have been permanently theirs. Unfortunately, however, the power thus confided to the landholders has been used principally as the means of oppressing the cultivators; and in order to remedy this evil, the Company has, of late years, with the view of abolishing the system of middlemen, become the purchasers of all estates thus held which have been brought to sale, and making their bargain directly with the farmers or ryots; whence the plan is termed *the ryotwary system*.

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* Stated in the accounts as partly estimated.

Of the other branches of revenue, the principal is the monopoly of salt, which is manufactured by the agents of government, and disposed of by public sale for ready money. The next in point of importance is the monopoly of opium, which in the year 1837-38 produced 2,09,65,187 Company's rupees, subject to R. 65,97,949 of charges, leaving R. 1,43,67,238 net. Being produced chiefly in the province of Bahar, the impost is levied only in the Bengal presidency. It has to compete, however, with the opium of Malwa, originally much inferior, but which, being manufactured by free cultivation, has improved greatly both in quantity and quality. The latter is exported at Bombay, where it pays a custom duty; a system which has been strongly recommended in Bengal, and would be attended with many advantages; but the large amount of the revenue, and the dread of smuggling, has caused every change to be viewed with apprehension. Tobacco is made a subject of monopoly only in the western districts of the Madras presidency. Customs are levied on the exportation, and also, down to 1837, on the inland transit of goods. Another order of imposts, which bears the title of *sayer*, appears to consist of dues levied at markets and the gates of towns. With these are usually combined a second class called *abkaree*, which are laid chiefly, in the form of license, on spirits, opium, and every species of intoxicating drugs. The other branches are derived from stamps, post-office, mint, marine duties and pilotage, to which may be added judicial fees and fines.

The expenditure consists partly of dividends to the proprietors, partly of charges attending the collection of the revenue and the maintenance of the various civil functionaries, but chiefly in the support of the Company's military establishment.

THE INDIAN ARMY.

In the government administered by the Company the most striking feature is that military force by which their colossal empire was mainly acquired, and is still held in subjection. Its composition is, perhaps, more remarkable than that of any army ever levied; for India is subjected to a foreign yoke by her own soldiers, paid with her own money. It might at first appear that a conquering state could not, without the utmost peril, rely on such means; but the incorruptible fidelity of the native troops or *sepoys*, under British commanders, has entirely removed all such apprehension. This army attained, by gradual steps, its present strength and discipline. A few battalions were at first employed merely as an appendage to the Company's forces, and at that time, captain, adjutant, and some sergeants were the only English officers attached to them. With the skill which these communicated, they easily vanquished the irregular troops of the native princes. When the latter, however, began to introduce European tactics, it became necessary to raise the indigenous force to a higher degree of efficiency; their complement of British officers was progressively increased, and they were more and more assimilated to regiments of the line. This method was brought into full operation in 1796; since which year no native has been allowed to rise above the rank of subahdar, the highest pay attached to which is 147 rupees per month; and in that station he is subject to the command of the youngest subaltern from England.

The following was the effective force of the Indian army in 1837; namely, British forces, consisting partly of Queen's troops, and partly of the Company's European regiments, 26,582; native troops, including 3728 British officers, 157,758; contingent native forces, 111,500; total, 295,840. Since the year just specified, the hostilities in Afghanistan and China have doubtless led to a very considerable increase in these numbers.

EAST INDIES. [India.]

EAU DE COLOGNE, a celebrated preparation for the toilet, is nothing more than aromatized alcohol. It is extensively manufactured in France from silent brandy, mixed with sage, thyme, camphor, cloves, and other herbs and spices; the whole being macerated together, and then distilled.

Eau de Luce is formed of the distilled oil of amber and water of ammonia.

EBONY (Fr. *Ebène*. Ger. *Ebenholz*), a hard, durable, black-coloured wood, obtained from different species of *Diospyros*, a large tree, found in tropical countries, especially in India, the Malayan Islands and Peninsula. That which is considered to be of the best quality is the *D. ebenus*, a native of the Mauritius, Ceylon, and Madagascar; being jet-black, astringent, and of an acrid, pungent taste. Ebony, besides its other qualities, is susceptible of an elegant polish or lustre, and has always been held in high estimation; it is at present chiefly used for inlaying, for making rules and scales, as not being liable to warp, and for other purposes in turnery; but it is in less request now than formerly for cabinet-making, cheaper woods, dyed black, particularly that of the pear-tree, being commonly substituted for it. About 2000 tons are annually imported.

ECU, an old French silver coin worth 6 livres; also a Swiss piece of 40 batzen.

ECUADOR, or EQUATOR, a state comprising the S. W. part of the former republic of Colombia, is situated on the W. coast of S. America, betwixt New Granada and Peru; and extends from 6° 30′ S. to 2° N. lat., and from 70° to 81° W. long. Area 325,000 square miles. Population, 600,000, of which about 160,000 are whites of Spanish extraction; the rest chiefly Indians. Divisions, Ecuador or Quito, Guayaquil, and Assuay, each subdivided into provinces. Capital, Quito, an inland town, and one of the finest cities of S. America; pop. 70,000. The government is republican, consisting of a senate and house of representatives, both elected by the cantonal deputies of the provinces, in a provisional assembly held once in four years.

The country is intersected by the Andes, and the temperature of course differs considerably in the elevated lands adjoining those mountains, and in the low countries on both sides of the range. The department of Quito, though subject to earthquakes, possesses a very mild and salubrious climate. That of Guayaquil and the valleys along the coast is warmer, and the portion of Assuay adjoining the river Amazon and its tributaries is very hot. The difference of climate gives a varied character to the productions of the country. The most important are cocoa, sugar-cane, cotton, tobacco, and cinchona bark. The last is obtained chiefly from forests in the mountains of Loxa in Assuay. In the department of Guayaquil, oak and other timber trees are produced, including the strong wood called guachapeli, cedar, ebony, and other cabinet woods. There are gold and silver mines in Quito, and at Zaruma in Assuay; but the country is less rich in the precious metals than the other states which comprehend a portion of the Andes. Quicksilver, however, is found at Azogues; lead also exists; sulphur is prepared in considerable quantity at Tesoan, in Chimborazo; and salt is procured on the coast.

The maritime commerce of Ecuador is concentrated at *Guayaquil*, a flourishing port situated in 2° 12′ S., and 79° 53′ W., on the N. bank of the river of the same name, the estuary of which is here about 2 miles broad; pop. 22,000. The port is one of the best on the Pacific, but the town is unhealthy, ill supplied with water, and from being built of wood, very subject to fires. On the S. bank of the river, there is a dockyard much used for shipbuilding. Exports, chiefly cocoa (nearly 9,000,000 lbs.), which is mostly sent to Spain, Mexico, U. States, and Peru, timber, hides, cattle, and tobacco; the annual value of the cargoes being nearly £290,000. The imports, consisting of British manufactures, wine, silks, and other articles, are of nearly the same amount.

Measures, Weights, and *Money*, same as New Granada.

Finances.—The annual revenue and expenditure are each estimated at $600,000. The domestic debt is unknown. The foreign debt consists of 21½ per cent. of the loans contracted in London for Colombia in 1822 and 1824, or £1,451,250, exclusive of arrears of interest thereon, at 6 per cent. since 1826.

EEL, a peculiar description of fish resembling the snake in its external form, but having otherwise little similarity. There are different species, but the most common is the sharp-nosed eel (*Murœna anguilla*). Eels inhabit almost all our rivers, lakes, and ponds; and are in great esteem for the table. The best kind—

the silver eel—is that found in the clearest waters. The dingy yellow, and the deep sallow-green, are very inferior to the clear coppery brown-backed eel, and even to the bronze-coloured. Their freshness is known by their vivacity of motion. "The London market is principally supplied from Holland by Dutch fishermen. There are two companies in Holland, having five vessels each: their vessels are built with a capacious well, in which large quantities of eels are preserved alive till wanted. One or more of these vessels may be constantly seen lying off Billingsgate: the others go to Holland for fresh supplies, each bringing a cargo of 15,000 to 20,000 lbs. of live eels" (*Yarrell*). About 70 cargoes are annually imported.

EFFECTIVE, a term used in many parts of the Continent to express coin, in contradistinction to paper-money. Thus bills upon Vienna are generally directed to be paid in *effective*, to guard against their being paid in paper-money of a depreciated value: very frequently also, the particular money in which the bill is to be paid is specified; as in 20 kreuser pieces.

EGGS (Fr. *Œufs*). The eggs of domestic fowls form a considerable branch of inland traffic, more particularly betwixt Ireland and Britain. "The trade in eggs, the value of which, for export, according to Mr Williams, in 1832, amounted to £500 a-day, paid by England to Ireland, is carried on with considerable vivacity at Lanesborough, and also at Tarmonbarry."—"In the height of the season, the prices at Lanesborough were from 2s. 6d. to 4s. per 120; but towards the winter, they rise to 5s. The eggs are packed in layers with straw, in crates. Each crate will hold about 84 hundred of six score, that is 10,080, the first cost being from £10, 10s. to £16, 16s. per crate. These are sent forward on speculation to Dublin, or occasionally at once to the English market; and a profit of £4 or £5 per crate is considered a fair remuneration" (*Weld's Roscommon*). Eggs are also largely imported from abroad,—no fewer than 96,000,000 being at present brought annually from the Continent, chiefly from the department of the Pas de Calais in France. Throughout the whole of that kingdom the egg trade is carried on to an extent hardly credible in this country. In a paper lately read by M. Legrand to the Statistical Society, the number exported in 1834 is stated at 90,441,600, and the total number consumed at 7,231,160,000; equal, at only 4d. the dozen, to £10,168,891. "The consumption in Paris is calculated at 115⅝ eggs per head, or 101,152,400. The consumption, in other parts of France, may be reckoned at double this rate, as, in many parts of the country, dishes composed of eggs and milk are the principal items in all the meals."

EGYPT extends in length about 500 miles along the river Nile, from its mouth upwards; and comprehends a breadth of 200 or 300 miles from the Red Sea to an ill defined boundary in the Libyan desert. It was formerly divided into 16 provinces, but is now composed of 24 departments, which are subdivided, according to the French system, into arrondissements and cantons. Population, 2,500,000, chiefly Arab-Egyptians or Felahs. Capital, Cairo, an inland city; pop. 240,000. Egypt is an appendage to the Turkish empire; but is under the government of a pasha, whose power is nearly despotic, though he occasionally consults a council composed of his chief officers.

The cultivated part of Egypt is confined to the banks of the Nile. This region is divided by nature into two parts,—Lower Egypt, composed of the alluvial tract formed by the Delta of the Nile; and Upper Egypt, an exceedingly narrow valley which extends nearly 400 miles along the Nile above its separation. On the E. and W. of this valley lie mountains and waste deserts, interspersed with oases. The climate of Upper Egypt, though hotter, is more healthy than that of the Lower country, where the plague is said to be indigenous, and ophthalmia and dysentery common in the autumn. In the latter, the annual range of Fahrenheit in the shade is from 50° to 100°. The climate is, however, principally characterized by its great dryness, which would render Egypt a desert were it not that the high lands of Abyssinia are periodically drenched by heavy rains, which lead annually, betwixt July and October, to the overflow of the Nile, and the irrigation of the greater part of the country.

"In Egypt, one necessity absorbs all others: unless the inundations of the Nile irrigate the lands, in vain, through immense districts, is the seed sown, in vain the husbandman goes forth to harvest. The inundations are very various in their character and consequences: when favourable to the upper regions, they are excessive in the lower; and when they suit the lower districts, they sometimes leave the higher country almost dry. The average course of the stream of the Nile is 1366 toises per hour, but the current is considerably increased during the time of the inundation. The prevalence of northerly winds more than compensates for the rapidity of the stream for vessels bound upwards. An inundation of the elevation of 24 coudees in Upper Egypt will give 21 at Cairo and 4 at the mouths of the Nile. The most productive inundation is from 19 to 21, measured by the nilometer at the island of Rhoda, opposite Cairo. The dike which lets out the waters of the Nile is cut when the elevation is 190 inches; and the "Ousfa Allah," or "Allah has kept his promise," is then shouted by the tens of thousands who attend to witness the ceremonial, on whose success so much of happiness or misery depends. As the fall of the dike is from 8 to 10 feet, the rush of the great mass of water is extremely violent. When the Nile rises from 23 to 24 coudees, 2,000,000 feddans are cultivated. The miri (land-tax) was, in 1833, established on this basis. But often the Nile does not rise above 19 coudees, and the inundation is not permanent enough to produce the effect desired. Egypt is calculated to have 3,500,000 feddans of cultivable land, if cultivation were pushed to its greatest extent." (*Bowring's Report on Egypt*, p. 12.)

There are few minerals. The productive powers of the soil, however, are incalculable. Wherever water is scattered, there springs up a rapid and beautiful vegetation; the seed is sown and watered, and scarcely any other care is required for the ordinary fruits of the earth. The agricultural produce consists of winter plants, which are sown and reaped after the inundation, and of summer plants, which are raised by artificial irrigation. In some parts three crops are obtained in the course of the year. The chief articles are wheat, barley, cotton, maize, millet, a variety of leguminous plants, tobacco, indigo, and flax. Sugar is cultivated throughout a large portion of Upper Egypt, and rice in the low lands near the Mediterranean. There are besides a great variety of fruits; but there are no timber trees. The improvement of the country has been vastly extended; and in several respects revolutionized, under the energetic government of the present pasha, Mohammed Ali. During his reign the cotton-plant has been introduced, and its cultivation so far carried, that the annual shipments of wool now amount to from 100,000 to 150,000 bales. He has also bestowed great attention on flax, the sugar-cane, indigo, opium, madder-roots and other dye-stuffs; and of late he has established a colony of Syrians in Tumulaut, the ancient Land of Goshen, for the purpose of cultivating the mulberry and rearing silk-worms. The pasha has likewise attempted the introduction of cotton-factories, and other European arts, but in general the native manufactures are rude and inconsiderable.

The commerce of Egypt is pretty extensive, but suffers greatly from the monopolies of the pasha, whose views, though in many respects enlightened, are in regard to commercial matters narrow in the extreme. Having created the commerce and manufactures of Egypt, he regards the whole as his own property, or at least so much under his control, that no one is permitted to think for himself, to fix his price, or to choose his market. Every landholder and manufacturer is obliged to convey the produce of his labour to some central depot, where it is purchased by the agents of government at fixed prices; and all articles must be marked, otherwise they cannot be legally sold. Even in the speculations of foreign trade, the pasha claims the right of taking a share with the merchants, so far at least as to advance funds, and enjoy a portion of the profit. The commerce may be divided into the inland and caravan trade; the Red sea trade; and the Mediterranean trade.

The Inland and Caravan Trade.

The chief commercial city of the interior is Cairo, but its trade has of late years much diminished, having ceased to be a depot, as it formerly was, both for articles of export and import. Alexandria, from the greater facilities which its position offers, has supplanted it in importance, and Cairo is now a great market only for gums, and some other secondary articles. Of late there has been a considerable export of diamonds and other precious stones to the East Indies, especially to Calcutta; but there is no English establishment, and the stocks of manufactures which exist are principally for the consumption of the place, the buyers for the interior finding it more advantageous to supply themselves from the warehouses of the importers at Alexandria.

The ordinary communication between Alexandria and Cairo is by the Mahmoudieh canal, which joins the Nile at Atfeh. Indeed this canal and the Nile are the most active, not to say the only channels of communication for the principal markets of Egypt. By boats of from 4 or 5 tons burden to vessels of 120, there is a perpetual intercourse on these two main arteries of commerce. Boulaq, the port of Cairo, and Atfeh, where the canal joins the Nile, are the principal places of shipment and landing.

There is, as already explained [CARAVAN], a yearly caravan of pilgrims from Cairo to Mecca, and their transit through Egypt, on their way to and from Arabia, will always create a considerable number of commercial transactions. The governor of Atfeh informed Dr Bowring, that the number who passed up the Nile to the holy cities was, yearly, from 20,000 to 25,000; but this estimate the doctor thought to be somewhat exaggerated. The caravan trade with the interior of Africa and with the Barbary States is also much associated with the pilgrimage to Mecca, as the hadjis generally join the great yearly caravan which leaves Cairo. The imports from Dongola, Darfur, Sennaar, and other African countries to the south of the first cataract, are now principally confined to negroes. A few elephants' teeth, rhinoceros' horns, and ostrich feathers; some gums, sesame, aloes, tamarinds, natron, and a small quantity of gold ornaments (groups), and gold-dust, are the chief articles of commerce. The amount of customs received averages about 20,000 purses, or £100,000 per annum. It has been long a favourite object of the pasha to extend the trade with the regions to the south of his territories; and so great is their productive power, that, under a proper system, it is no doubt susceptible of an enormous augmentation. It was indeed formerly very considerable, but the heavy duties exacted by his highness have led to its abandonment by the Frank merchants. The article of gums, according to the best information obtained by Dr Bowring, might be produced to a very large extent in Sennaar. Kordofan alone would give yearly, he was assured, 8000 loads, each of 550 rottoli. The impediments which the commercial intercourse with the interior has experienced in Egypt have forced it into other channels; and the African traders now carry their goods to the Barbary States, and even to the distant ports of Zanzibar and other possessions of the S. E. coast of Africa subject to the Imaum of Muscat, who has of late held out great encouragement to commerce in that quarter. (*Report*, pp. 64, 67.)

The Red Sea Trade.

The two principal ports of Egypt on the Red sea are, *Suez*, at the head of that gulf, and *Cosseir*, about 300 miles further south. These ports communicate with Cairo and Keneh respectively. Their chief exports are grain, butter, and sugar, sent mostly to Jidda and Yembo; their imports, coffee, spices, silks, and piece goods. Keneh has generally sent large quantities of wheat to Arabia, sometimes as much as 200,000 ardebs per annum. The late augmented number of travellers from and to the East Indies, by way of Egypt, has increased the importance of both these ports, and particularly of Suez, which is that resorted to by the Bombay steam-vessels. Camels ordinarily perform the journey in three days from Cairo to Suez, and in four from Keneh to Cosseir. The roads are now so safe that there is no accumulation into caravans; but goods are conveyed as they are ready with the utmost regularity and security.

The Mediterranean Trade.

The great emporium of this trade, and the link which connects Egypt with Europe, is *Alexandria*, a celebrated seaport, lying in lat. 31° 13′ N., and long. 29° 53′ E. It is situated at the western extremity of the Egyptian coast, upon a neck of land between the sea and the bed of the old lake Mareotis; pop. 60,000. There are two ports; the best being the old one, on the W. side of the city, in which, though the entrance is rather narrow and difficult, ships may ride in from 22 to 40 feet water; and there is good anchorage all along the shore. The small new harbour, on the E. side of the town, is exposed, and otherwise very inferior. Alexandria communicates with the Nile by means of the Mahmoudieh canal, already noticed. This was an ancient work, but it had fallen into disrepair, and was useless until restored by the present pasha in 1819. Exports, mainly cotton-wool; also rice, corn, opium, indigo, dates, gums, incense, dried fruit, coffee, senna and other medicines, hemp, linseed, mats, ostrich feathers, soda, skins, mother-of-pearl, and a variety of other articles; the quantity of corn exported, especially wheat, was formerly considerable, but it has gradually diminished, in consequence of the greater encouragement afforded by the pasha to the growth of cotton. This last, as also indigo and gums, are mostly sent to Trieste, Leghorn, Liverpool, and Marseilles; the rice and opium to Smyrna, Constantinople, and the Greek islands. Imports—from Great Britain, chiefly cotton manufactures, especially white cotton cloth, yarn and twist, hardware, arms, machinery, earthenware, and coals; from France, Switzerland, Italy, and Germany, are received wines, spirits, oils, cotton manufactures, silks (principally gros de Naples and lustrings), articles of dress, furniture, hardware, trinkets, and other commodities suited not only to Egypt, but the interior of Africa; from Austria, timber for building and fuel (a valuable import); from Turkey and the Greek isles, silks, tobacco, oils, wood, and fruits; from Syria and Asia Minor, carpets, especially small prayer carpets, tobacco, figs, soap, and other necessaries. The value of the exports is estimated at about 2½ millions sterling; that of the imports at half a million more.

According to the monopolizing system of the pasha, the whole of the commodities, the produce of Egypt as well as of the adjacent countries under his influence, are purchased for him in the first instance; the prohibition of trading in them applying to every one, under the penalty of confiscation. The whole are collected in Alexandria, where they are sold by public auction, the upset price being fixed according to the latest report of the markets.

The only other ports on the Mediterranean side are, *Damietta*, situated in 31° 25′ N., 31° 47′ E., near the mouth of the eastern branch of the Nile; and *Rosetta*, in 31° 25′ N., 30° 26′ E., at the mouth of the western branch. These would by their position seem to offer great advantages, but the badness of their harbours, and the facility which is now given by the Mahmoudieh canal, have caused a gradual declension of their trade. That which exists is mainly with Syria, Cyprus, and Candia. English vessels seldom enter; though, occasionally, one from the Ionian Islands visits Damietta. Rice is the principal article of export, but its cultivation is much on the decline.

Measures, Weights, Monies, Duties, &c.

Measures and Weights.—It is difficult to give any exact standard of Egyptian weights and measures. They not only vary in different parts of the country, but have been changed by capricious legislation in the same way in which the currency has been at different times altered by firmans from Constantinople. The following are those in most general use:—

The common Egyptian cubit = 22¾ Imp. inches; the Indian cubit, chiefly used for Indian goods, = 25 Imp. inches; the cubit of Constantinople, used for measuring European cloth, = 26½ Imp. inches. The malakha, the distance from one station to another, is a vague measure, varying from 2 to 6 miles.

The feddan, land-measure, approaches an Imperial acre. The ardeb, corn-measure, of 6 weybehs, or 24 roobas, equal 5 English bushels nearly.

The kirat = 3 troy grains; the dram or dirhem = 48 troy grains; the oke of 400 drams = 2¾ lbs. avoirdupois nearly; the rottolo or pound = 144 drams = 15¾ oz. avoird. nearly; the oke = 2¾ rottolis; the cantar of 36 okes, or 100 rottoli = 98¾ lbs. avoird. nearly.

Money.—The integer of account is the piastre or *ckirsh* (of 40 fuddahs or paras), a base coin of silver and copper, usually estimated at about 2⅖d. sterling, or 100 piastres = £1; but this is subject to variation with the exchange. The smallest Egyptian coin is the fuddah; there are also pieces of 5, 10, and 20 fuddahs. The saadeeyeh and kheyreeyeh are small gold coins, equal the former to 4, the latter to 9 piastres. The coins of Constantinople, though current, are rare. European and American dollars, doubloons, sequins, and sovereigns are also in circulation. The ryal is a nominal money = 90 fuddahs. The *kees*, or purse = 500 piastres, or about £5; the *khuzneh*, or treasury = 1000 purses.

The Duties on imports or exports are 3 per cent.; but on most of the produce sold by the government no duty is charged, except on cotton, which is subject to an impost of 6$\frac{3}{10}$ piastres per cantar. "Generally speaking," says Dr Bowring, "there are few complaints of the amount of the duties in Egypt, or the manner in which they are levied. British merchants pass their goods at their own valuation, and it is very rarely that a question arises as to the sum of duty with which they ought to be charged; and I am assured that it is seldom that a bale of merchandise is opened in order to verify the statements of any respectable European importer." (*Report*, p. 69.)

Finances.—The present revenues of Egypt were stated by the government to Dr Bowring to be 900,000 purses, or £4,500,000; but no details were furnished. The principal source of income is the *miri*, or land-tax, which appears to be considered throughout Egypt as an equivalent for rent. There is no national debt of any sort.

EIMER, a German wine measure, varying in different places from about 12 to 16 gallons; the Munich eimer, however, is only 8½ gallons.

EJOO, or INDIAN HEMP, a black fibrous substance resembling coarse horse-hair, which protrudes itself in large tufts from between the corticeous scales of the sago palm. The length of the fibre runs from 1 to 1½ foot, and each tuft contains about 6 lbs. of the hemp. Ejoo cable is said to be considerably stronger than coir; and it undergoes a longer exposure to sun and rain alternately, without experiencing any effectual damage. It has of late attracted notice, but hitherto has been used chiefly by the Malays about the Straits of Malacca.

ELATERIUM. [CUCUMBER.]

ELDER, a common tree (*Sambucus niger*), various parts of which, especially the expressed juice of the berries, are occasionally used in medicine as a purgative. The tree is frequent in hedges in this country; it flowers in June, and ripens its fruit in September.

ELEMI, a resinous substance obtained from incisions made during dry weather through the bark of the *Amyris elemifera*, a tree which grows in Brazil and other parts of S. America. It is brought to us in yellow, tender, transparent lumps, which readily soften by the heat of the hand, have a strong aromatic odour, a hot spicy taste, and contain about 12½ per cent. of ethereous oil. Elemi is used in making lacquer, to give toughness to the varnish.

ELEPHANTS' TEETH. [IVORY.]

ELL, a measure of length now superseded in the United Kingdom by the Imperial yard. The English ell = 45 inches; the Scottish ell = 37·0598 inches; the Flemish ell = 27 inches. In Hamburg it is equal 22½, in Leipzic, 22¼, and in Prussia, 26¼ inches nearly.

ELM, a graceful timber-tree (*Ulmus*) which attains a large size, and lives to a great age. There are about fifteen species. The common elm (*U. campestris*) is said to be indigenous to the southern part of this island. It is a tough and strong timber, but coarse and open in the grain, more especially when it has grown upon very rich land. Hence that which grows in the more fertile parts of England is far inferior to the produce of the midland counties of Scotland; the latter, which seems to be the mountain elm (*U. montana*), being much closer in the grain, harder, more handsome, and taking a finer polish. The English is seldom used but for common purposes, such as casks, coffins, and presses, while of the Scottish, chairs and other articles of furniture are made. Elm timber is quite unfit for building, on account of its tendency to warp and shrink during drought, and expand when moist; but if wholly under water it answers well; and bolts and nails drive better into it than into any other wood. It is also adapted for the external keel of ships, and for the planks nearest to it, as these are seldom exposed to the air; the same qualities fit it for piles in the construction of bridges and harbours; though it should never be used above the low-water mark.

EMBARGO, a temporary injunction by the supreme government of a country prohibiting individuals or commodities from being conveyed beyond seas, or vessels from leaving their ports. There are two kinds of embargo, the one where the sovereign detains the vessels of an adverse nation in his harbours, the other where he suspends the sailing of those of his own subjects. The former generally takes place on a declaration of war, and is sanctioned by the law of nations; the latter is a matter of internal administration, involving, in this country, questions as to the power of the crown. On the issuing of a declaration of war, it has become, by the practice of Europe, generally the first step, to lay an embargo on such vessels of the country declared against as may happen to be in the ports of the government declaring. This step is reconciled with the old principles of the law of nations by the view, that the *casus belli* and virtual declaration will have taken place before the literal proclamation. With regard to the right of placing an embargo on British ships or subjects, it is of a wider range in time of war than in time of peace, and seems in the former case to embrace all those occasions where the prohibition can be presumed necessary or useful to the national defence. In time of peace, however, the crown must exercise the right within the limits which the law allows, the extent of which is somewhat doubtful. In 1766, a proclamation was issued prohibiting the exportation of corn, on account of the risk of famine; but it was thought necessary to pass an act of indemnity (7 Geo. III. c. 7), which characterized the order as one that "could not be justified by law, but was so much for the service of the public, and so necessary for the safety and preservation of his Majesty's subjects, that it ought to be justified by Act of Parliament." The proprietors of the embargoed ships were indemnified, which they would not have been had the embargo been legal. Loss by embargo is one of those which underwriters have to make good; while a breach of embargo is one of those breaches of warranty which release them from their obligation. An embargo laid on by the government of the country in whose port a vessel is, being but a temporary suspension, does not dissolve a contract for the employment of the vessel. But in the case of a British subject freighting a vessel which is subject to embargo on account of hostility to the country to which the ship belongs, he will not be responsible for terminating the contract if the object of the voyage would be likely to be defeated by delay. (*Chitty on L. of Nations*, 68-73. *Abbot*, 429-431. *Marshall*, 511.)

EMERALD, a beautiful ornamental stone of a peculiar green colour, which it derives from the intermixture of a small proportion of chrome. The common form of its crystal is the hexahedral prism; transparent or translucent; lustre vitreous. Sp. gr. 2·75. It scarcely differs from beryl, except in colour. Localities, Egypt, New Granada, Hindostan, Germany. "The most splendid crystals of emerald occur in a vein of magnesian limestone, which traverses a hornblende rock at Muso, near Santa Fé de Bogota, in New Granada; some of these have been found exceeding two inches in length and breadth. Less distinct varieties occur at Mount Zalora, in Upper Egypt, the only locality of emerald with which the ancients are believed to have been acquainted." (*Phillips' Mineralogy*.)

EMERY, a granular variety of corundum usually mixed with iron ore. Its colour is intermediate between grayish black and blueish gray. Lustre glistening and adamantine. Sp. gr. 4. It occurs abundantly in the isle of Naxos, and at Smyrna. It is used for grinding and polishing hard minerals and metals.

EMIGRANT, in a general sense, is a person who leaves a country with all his property, to settle permanently in another, but it is more commonly applied restrictedly to an individual who leaves an old and thickly-settled country, to establish himself in one where there is abundance of land that has never been cultivated, and a thinly-scattered population. Emigration to new countries is a necessary consequence of the constitution of man and society; but in order that it may be a successful undertaking, it is essential that it should include both capitalists and labourers, or persons who combine both characters. The abstraction of capital and industry might seem so much good taken from the mother country, but this is outweighed by greater advantages. A system of emigration, based upon right principles, is calculated to keep the pressure of population upon the means of subsistence, in an old country, constantly in a healthy condition; while the emigrants often retain in their new settlements, through the medium of commercial exchange, a connexion with the parent state, which is ultimately much more productive of wealth to it than if they had never withdrawn. Thus many who settle in North America or Australia, with nothing but their sinews and their industry, become the possessors of land and flocks, and purchase much more of the products of British labour and capital than if they had remained at home.

The emigrants from this country have hitherto mostly proceeded to the United States and Canada; but of late a considerable number have also gone to Australia, and recently not a few to New Zealand. The greatest number of persons who have hitherto emigrated in any one year was in 1832, when, according to the public accounts, they amounted to 103,313; of whom there went to our North American colonies, 66,339; United States, 32,980; Australian settlements, 3792; and Cape of Good Hope, 202. The official statements of the number of emigrants are, however, almost necessarily defective, as many persons proceed from the British islands as emigrants on board vessels which are not wholly devoted to the conveyance of passengers, and of whom no record is kept at the custom-house. It ought also to be noticed, in reference to the above-mentioned distribution of emigrants, that a large proportion of those who proceed to the United States have no intention of remaining there, but, in proceeding to Upper Canada, take the route of New York in preference to the St Lawrence, the navigation of which is both tedious and dangerous. The greater part of the emigrants from the United Kingdom are natives of Ireland.

The following is, in general terms, the nature of the conditions on which public lands can be acquired in the colonies:—In the Port Phillip district of New South Wales, and in Western and Southern Australia, they are sold at a fixed price, which is for the present established at £1 per acre. In the following colonies sales are made by auction, and take place at certain periods, the land being offered at these respective upset prices; namely, Sidney district of New South Wales, comprising at present all parts except the Port Phillip district, 12s. per acre; Van Diemen's Land, 12s.; Ceylon, 5s.; New Brunswick, 2s. 6d. The Canadian rates cannot be stated with certainty, until after they shall have been revised by the united colonial legislature, now in the course of being assembled. In the Port Phillip district, and in Western Australia, the land is divided into lots of 320 acres, or half a square mile. In Canada, the lot has generally been 200 acres; in Ceylon, 100 acres; in Van Diemen's Land and the Sydney district of New South Wales, the size of the lot is one square mile, except under special circumstances.

In New South Wales, which was founded as a penal settlement, the supply of labour has been chiefly furnished by convicts; and this system, though in less favour than formerly, is still continued. With the view, however, of facilitating voluntary emigration, government now grants a free passage to labourers and mechanics accustomed to out-door work and not exceeding 35 years of age, proceeding to that colony or Van Diemen's Land. A similar advantage is granted by the South Australian Company and the New Zealand Company to labouring emigrants from the United Kingdom to their respective territories, the funds for that purpose being derived from the sale of their lands,—a purpose to which they are specially appropriated; but no system of this kind has hitherto been established in reference to Canada or the other colonies.

Most of the emigrants from this country being persons in humble life, unacquainted with shipping, and the precautions necessary to ensure safety, convenience, and economy, it has been of late years found necessary to place emigration vessels under statutory regulations. The following is an abstract of those at present in force:—

ABSTRACT OF THE PASSENGERS' ACT, 5 & 6 WM. IV. c. 53 (1835).

§ 1. Act of Geo. IV. c. 21 repealed.

Number allowed on Board, § 2. No ship carrying passengers from the U. K., Channel Islands, or Man, to any place out of Europe, shall carry more than 3 persons (including master and crew) for every 5 register tons of such ship; and no ship having more than one deck shall carry passengers upon such voyage, unless she be at least 5½ feet in height between decks; and no ship having only one deck allowed, unless a platform be laid beneath such deck, so as to afford a space 5½ feet high, and no ship shall have more than 2 tiers of berths, while in ships having 2 tiers, there must be an interval of at least 6 inches between the deck or platform and the floor of the lower tier: provided that whatever be the ship's tonnage, no greater number of passengers shall be allowed than after the rate of 1 person for every 10 superficial feet of the lower deck unoccupied by goods or stores not being passengers' luggage, if such ship shall not have to pass the line on her voyage, or after the rate of 1 person for every 15 clear superficial feet if such ship have to pass the line.

Water and Provisions, § 3. No ship as aforesaid shall be cleared out unless there be on board good provisions for the use of the passengers, over and above the victualling of the crew, as follows;—namely, 5 gallons of water to every week of the computed voyage for every passenger, such water being carried in tanks or sweet casks, and 7 lbs. of bread, biscuit, oatmeal, or bread-stuffs to every such week for every passenger. To the extent of one-third of such supply, 7 lbs. of potatoes may be held equivalent to 1 lb. of bread, biscuit, oatmeal, or bread-stuffs, in the supply of any ship bound to N. America. When any ship shall be destined to call at a place in the course of her voyage for the purpose of filling up her water, a supply at the above rate for every week of the computed voyage to such place shall be deemed a compliance with the act.

Computed Time of Voyage, § 4. The number of weeks deemed necessary for a voyage shall be computed according to the following rule: namely, for a voyage to N. America, 10 weeks; to S. America, on the Atlantic, or to the W. coast of Africa, 12 weeks; to the Cape of Good Hope, 15 weeks; to the Mauritius 18 weeks; any other voyage, 24 weeks.

Survey of Provisions and Berthage, § 5. Before any such ship shall be cleared, the officers of customs shall survey, or cause to be surveyed by some competent person, the provisions, water, and berths as aforesaid, and shall ascertain that there is besides an ample supply of water and stores for the crew.

Prices of Provisions, § 6. The master shall cause a table to be drawn up of the prices at which stores are to be sold by any person on board, and no higher prices shall be charged during the voyage; but this shall not be construed as requiring the master to provide stores for sale to passengers who have contracted to victual themselves.

Miscellaneous Enactments, § 7. If doubts arise as to seaworthiness of ship, which are not removed to the satisfaction of the principal officer of customs, the ship is to be surveyed by two competent persons.

§ 8. Two copies or abstracts of this act shall be kept on board, one of which to be furnished by master for perusal of passengers when required.

§ 9. Every such ship carrying (except to N. America) 100 passengers, must have a medical practitioner, with the requisite medicines, on board.

§ 10. Such ships prohibited from exporting spirits.

§ 11. Master to deliver list of passengers to officer of customs.

§ 12. Passengers not to be landed at place not contracted for.

§ 13. Two children under 14 years, but above 7, or three under 7, shall be reckoned as one person; infants under 12 months not counted.

§ 14. Unless ship detained by stress of weather, or some other unavoidable cause, passengers to be victualled during any detention which may take place beyond time stipulated.

§ 15. Passengers to be maintained for 48 hours after their arrival.

§ 16-19. Penalties, &c.

§ 20. This act not to extend to ships carrying passengers in cases where the number of persons, computed as before, shall not exceed 1 for every 5 tons, nor to government ships.

§ 21. Bahamas, and places in America southward thereof, shall be deemed to be in S. America.

EMPORIUM, OR MART, a principal place for the importation and sale of merchandise. Such a place was formerly called a *staple*.

ENAMEL (Fr. *Email.* Ger. *Schmelz.* It. *Smalto*), a kind of glass of which there are several varieties, generally opaque and coloured,—always formed by the combination of different metallic oxides, to which certain fusible salts are added, such as the borates, fluates, and phosphates. It is prepared for the use of the painter in enamel, and for enamelling watch and clock dials, jewellery, and other articles. The best is brought from Venice in round cakes, about six inches in diameter, and half an inch thick.

ENDOWMENT, in Life Insurance, is a term applied to the assurance of a capital sum on survivorship of time.

ENGRAVINGS. Those who invent or engrave, or cause to be invented or engraved, works of art, maps or plans, on plates, enjoy a copyright in them for twenty-eight years from the day of publication. (8 Geo. II. c. 13; 7 Geo. III. c. 38, §§ 1, 7; 17 Geo. III. c. 57.)

ENGROSSING, the purchasing of large quantities of any commodity, in order to sell it again at a high price. [Corn.]

ENTREPOT, a place into which commodities are imported and stored, with the view of being afterwards re-exported to some other place for consumption.

ENTRY. [Customs Regulations.]

EPSOM SALTS (Fr. *Sel d'Epsom.* Ger. *Epsom Salz*), or Sulphate of Magnesia, is a well-known saline bitter medicine which derives its name from having been formerly obtained from the springs of Epsom in Surrey. It occurs native, but is usually procured from the *bittern* remaining after the extraction of sea-salt from sea-water; it is also largely obtained in some alum-works, and occasionally from saline springs. Besides being used in medicine, it is largely consumed for the preparation of carbonate of magnesia.

EQUATION OF PAYMENTS. When several sums of money due at different times are owing from one person to another, it is sometimes required to find the time when they may be all discharged in one payment without injury to either party: this is called *equating the payments;* and the principle of the rule consists in finding the time when the interest of the sums which are deferred till after they are due is equal to the discount of those which are paid before they are due.

1. Reckoning Simple Interest.

Rule.—Multiply each sum by the time when it is due, then divide the sum of these products by the total debt; the quotient is the time at which all the money ought to be paid.*

Example.—A sum of £300 is due on 2d March; £350 on 18th March; and £525 on 17th April; required an average time for the payment of them all in one sum?

The number of days from the 2d to the 18th of March is 16; and from the 2d March to the 17th April, 46; hence,

$$\begin{array}{rcrcr} 300 & \times & 0 & = & 0 \\ 350 & \times & 16 & = & 5{,}600 \\ 525 & \times & 46 & = & 24{,}150 \\ \hline 1{,}175 & . & . &) & 29{,}750 \end{array}$$

(25 days from March 2d, or March 27th nearly.

The distance of time is calculated from the 2d March, because the first sum becoming due on that day, there is no discount to calculate upon it.

2. Reckoning Compound Interest.

Rule.—From the logarithm of the sum of all the debts subtract the logarithm of the sum of the present values of such debts, and divide the remainder by the logarithm of the amount of £1 in a year, at the given rate of interest: the quotient will be the equated time required. (*Baily*, p. 94.)

Example.—Suppose A were indebted to B in the sum of £750, which was to be paid in three instalments; namely, £250 at the end of 1½ year; £100 at the end of 2 years; and the remaining £400 at the end of 4 years; in what time, reckoning compound interest at 6 per cent., ought the whole to be discharged in one payment?

Here we have the sum of all the debts = 750, and the sum of their present values = 634·913963. [Interest and Annuities.] Consequently,

$$\frac{\text{Log. } 750 - \text{Log. } 634{\cdot}913963}{\text{Log. } 1{\cdot}06} = \frac{{\cdot}0723463}{{\cdot}0253059} = 2{\cdot}85887\text{, or 2 years and 313 days.}$$

ERMINE (Fr. *Hermine.* Ger. *Hermelin.* It. *Armellina*), a species of weasel (*Mustela candida*) which produces the most valuable of the furs. It is of perfect whiteness, except the tip of its tail, which is of a brilliant shining black. The fur of the older animals is preferred to the younger. It is taken by means of snares, and sometimes shot with blunt arrows. The ermine of the best quality is procured only in the cold regions of Europe and Asia. An animal called the *stoat*, a kind of ermine, is said to be found in N. America, but it is very inferior to the European and Asiatic.

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* This rule is founded on the supposition that we are to find the time when the interest of the sums which are kept till after they are due, is equal to the *interest*, and not to the *discount*, of those which are paid before they are due; this, however, is not strictly correct; but since the erroneous practice universally prevails of taking the interest instead of the discount from sums which are due at a future period [Discount], the above rule is generally adopted in business as affording a near and convenient practical approximation. The substitution of interest for discount is, of course, to the advantage of the debtor.

In Mr Baily's Doctrine of Compound Interest and Annuities (p. 92), an analytical formula is given which brings out the true value for *two* sums; but where they are more numerous the formula becomes too complicated; and there is no rule, fit for general use, by which we can obtain the *exact* values when simple interest only is reckoned. Where compound interest, however, is computed, the true equated time may in all cases be determined with the greatest accuracy by the rule given in § 2.

ERRORS EXCEPTED. [Account.]

ESPARTO, or SPARTO, a plant (*Stipa tenacissima*) growing in Spain and Africa, anciently held in esteem for the manufacture of cordage, but now nearly in disuse, except in the countries of its production. It is found wild in places so barren as scarcely to produce any other spontaneous vegetation. At the present time it is used by the Spaniards for various purposes, especially in the manufacture of a kind of shoe, or rather sandal, called *alpergates*, much worn by the Catalans. The sparto of Africa is very inferior.

ESSENCES, either ethereous oils, in which all the fragrance of vegetable products reside, or the same combined and diluted with alcohol.

Essence of Bergamot or Lemon, the essential oil obtained from the lemon and bergamot orange, by expression of the rind. It is yellow, fluid, very fragrant, and is imported from the Mediterranean for the use of perfumers.

Essence of Spruce is prepared by the decoction of the branches of the fir tree. It is of the colour of treacle, but not so thick, and has a peculiar but not unpleasant taste. It is imported from America, Norway, Russia, and other countries.

ESSENCE D'ORIENT, a beautiful glistening matter obtained from the scales of a small river fish, the blay or bleak, called in French *ablette*, a species of *Cyprinus*. It is found principally at the base of the scales, and is used in the manufacture of artificial pearls.

ESTRICH (Fr. *Duvet d'autruche*. It. *Penna matta di strozzo*), the fine soft down which lies immediately under the feathers of the ostrich. The finer kind is occasionally used as a substitute for beaver in the manufacture of hats; the coarser is sometimes fabricated into a species of cloth.

ETHER, a volatile fluid produced by the distillation of alcohol with an acid. Ethers are of different kinds, as sulphuric ether, nitric ether, &c., each being distinguished by the name of the acid by which it is formed. The most common is sulphuric ether, a transparent, colourless, inflammable fluid, of a very fragrant odour and hot pungent taste. It is eminently volatile, and during its evaporation it produces an intense degree of cold. Sp. gr. about ·740. It is used for dissolving oils and resins, and for a variety of medical and philosophical purposes.

EUPHORBIUM (Fr. *Euphorbe*. Arab. *Aka nafsah*, *Farfiyan Gholak kala*), a resinous substance produced from several species of African *Euphorbia*, and more particularly from a kind growing on the Atlas Mountains. It is imported from Morocco, and occurs in tears or roundish and oblong masses; odour very weak, and taste at first scarcely perceptible, but afterwards acrid and corrosive. Euphorbium is a strong medicinal drug; the cathartic quality being rather too vigorous for European practice. It is said that the bark of the plant is greatly valued by the native tanners, and that to its singular effects the leather of Morocco owes its chief pre-eminence.

EXCHANGE, a term that is used in reference to those transactions by which the debts of persons residing at a distance from their creditors are liquidated without the transmission of money; being employed by merchants both to designate the bills or negotiable instruments by which transactions of this kind are conducted, and the varying price or *course* of such instruments in the market. The nature, constitution, and negotiation of Bills of Exchange having been already explained under that head, the present article will be devoted to an explanation of the principles by which exchange transactions are regulated; to which will be added practical formulæ for the ordinary calculations that occur in such transactions.

A foreign bill of exchange is an order addressed to a person residing abroad, directing him to pay a determinate sum of foreign money to the person in whose favour it is drawn, or to his order. The amount of foreign money, therefore, to be paid is fixed by the bill; but the amount of British money (or money of the country in which the drawer resides), to be given for the purchase of the bill, is by no means fixed, but is continually varying.

The causes which influence these variations will be best explained by tracing separately the circumstances determining the price of bills; namely, first, the value of the money in which they are to be paid compared with that with which they are bought, termed the *nominal exchange*; secondly, their abundance or scarcity in the market compared with the demand for them, termed the *real ex-*

change; while the combined effect of the real and the nominal exchange will be afterwards considered in treating of the *computed exchange.*

THE NOMINAL EXCHANGE.

The coins in which the monies of account of different countries are reckoned vary generally not only in denomination, but in weight and fineness, and consequently in exchangeable value. Moreover, some consist of silver, others of gold. Thus the ruble is the money integer of Russia, the guilder that of Holland, the franc that of France, and the pound sterling that of Britain. But the ruble contains nearly twice as much silver as the guilder, and the guilder about twice as much as the franc, while the pound sterling is represented by a gold coin.

The relative value of the monies of different countries is in general determined according to the quantity of pure silver or pure gold contained in the coins which form the principal media of payment, or legal tender,—alloy never being taken into account; and between two countries employing the same metal for their standard, that sum of the money of either of the two which in point of intrinsic worth is precisely equal to a given sum of the other, that is, contains precisely an equal weight of silver or gold of the same fineness, is usually termed the *Par of Exchange.** Between two countries employing the one silver and the other gold, there can be no invariable par of exchange, as the relative value of these metals is subject to fluctuation; but as this fluctuation has a very limited range, it has been customary to assume a par, founded on their average prices in the market.

In the United Kingdom, gold coin being the legal tender, there is properly no par of exchange, except with the United States, Sicily, and a few of the minor bill markets on the Continent, where the established media of payment also consist of gold. With countries or places which use silver, only an average or approximate par can be stated. In the valuations of foreign monies in the present work, this approximate par is given on the assumption that the proportionate value of gold to silver is as $15\frac{46}{80}$ to 1; standard gold being estimated at its fixed mint price of £3, 17s. 10½d., and standard silver at its average market price of 5s. per ounce.

Of the two terms of comparison between the money of one place and that of another, one is fixed, the other is variable. The place whose money is reckoned at the fixed price is, in commercial language, said to *receive* the variable price; the other is said to *give* the variable price. Hence the higher the exchange between any two places, the more it is in favour of that which receives the variable price; the lower, the more in favour of that which gives the variable price;—the exchange being said to be favourable or unfavourable to any place, according as a smaller or larger amount of the currency of that place is required for discharging a given amount of foreign payments. Thus London receives from Paris a variable number of francs and centimes for £1 sterling; and taking the par at 25 francs 34 centimes for £1, exchange will be 5 per cent. in favour of London when it rises to 26 francs 62 centimes, and about 5 per cent. against London when it falls to 24 francs 7 centimes.

Supposing a par to be established, the fluctuations in the *nominal* price of bills drawn by one country upon another will arise principally from an alteration in the weight or fineness of the coin of either of the countries, or an alteration in the total amount of the currency of either country, without a corresponding alteration in the commodities to be circulated. When the currency of a country is depreciated, whether from degradation of the coin, or from relative overissue, it is impossible that the same amount of it should purchase the same sum of foreign money as before its depreciation. A bill on a foreign country, being in fact an order for payment of a given sum of foreign money, will not be sold unless for such an increased amount of the depreciated currency as will counterbalance the diminution in its value; in other words, foreign bills will bear a premium in proportion to the depreciation. In the same manner, a bill on the country where the currency is depreciated will be bought abroad, where money retains its value, for a much less nominal sum than the amount for which it is drawn; or, in other words, will be at a discount.

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* This definition of the intrinsic par of exchange, which is that given in the Report of the Bullion Committee of the House of Commons in 1810, and generally understood by merchants, is objected to by economists in so far as it does not make allowance for the difference in value of the precious metals in different countries, owing to the greater facilities enjoyed by some in procuring these metals, from their vicinity to the mines or otherwise; but the difference in value thus occasioned is in general very trifling, particularly in Europe, throughout which, according to the late M. Rothschild, gold finds its level to within ½ per cent.; and the above is the only sense in which the term par can be employed in showing the average relative value of the currencies of different countries by comparison of their coins. For the practical purposes of the bullion merchant or exchange speculator, however, the par of the day must be carefully deduced from the market prices of the metals in the manner explained below (page 290).

Hence, after a par of exchange has been established, an alteration in the value of money, whether it arises from degradation of the coin, or depreciation of the coin or paper from relative overissue, will alike affect the price of a foreign bill, and be made evident by an unfavourable *nominal* exchange.

In the process of restoration of a currency, after being depreciated, it is scarcely necessary to observe that these phenomena will be reversed.

THE REAL EXCHANGE.

We now proceed to consider the manner in which the market price of bills is affected by their abundance or scarcity, compared with the demand for them on which depend the alterations of the *real* exchange; and as in treating of the *nominal* exchange, we endeavoured to preserve the subject distinct from the *real* exchange, by supposing the price of foreign bills to be unaffected by any variation in their abundance or scarcity; so in tracing the effect of the *real* exchange we shall suppose the state of the *nominal* exchange to remain unaltered, and that no change takes place in the value of the currencies in the respective countries.

In the commercial intercourse between two countries, when neither of them imports from the other to a greater amount than it exports to the same country, the bills drawn *by* the merchants exporting produce will exactly equal in amount the bills drawn *on* the merchants importing produce, and their mutual debits and credits will be liquidated without the transmission of coin or bullion.* In this case the supply of bills being equal to the demand for them, they will neither bear a premium nor be at a discount, and the *real* exchange, however the nominal exchange may alter, will be at par.

But it seldom or never happens that the exports and imports are so exactly equal as to leave no balance. When the imports are in excess, and more payments have to be made than received, the importer, rather than incur the expense of transmitting coin or bullion, will be induced to give more for a bill of exchange upon a party in the creditor country than the sum for which it is drawn. A competition will thus be created among the purchasers of bills upon the creditor country, and the holders will refuse to part with them, except an additional price be given as a premium in proportion to the demand. In the creditor country, on the contrary, there will be more persons holding than there are wanting bills, and the excess above the demand can only be converted into coin or bullion by sending them to the place upon which they are drawn. But this operation involving the expense and risk attending the transit of the bullion, the holder of a bill on the creditor country, if he be desirous of converting it into money, will be content to receive something less than its amount. There will therefore be in the creditor country a competition to sell, and bills will be at a discount in proportion to the supply. The premium in one country will correspond with the discount in the other. But neither the premium nor the discount can for any long time exceed the expense of transmitting bullion, which therefore forms the natural limit to the fluctuations of the *real* exchange between any two countries.

The transit of bullion, however (unless from countries producing the precious metals), rarely occurs except in small quantities: international accounts are never closed; and various facilities exist for warding off such a state of things as would take place if a periodical settlement were enforced as in accounts between individuals.

1*st*, The tendency of an unfavourable state of the *real* exchange is to stimulate exportation and check importation. Commodities which would only just pay with exchange at par, would yield a profit sufficient to induce exportation, where the exporter could secure 1 or 2 per cent. more for the draft upon his foreign debtor. On the other hand, an imported commodity which was only just paying when exchange was at par, would cease to yield a profit sufficient to induce importation when the importer should have to pay a premium for a foreign bill if he remit one to his foreign creditor, or a discount added to the invoice price if his creditor draws upon him. Thus, by the stimulus to exportation the supply of bills would be increased, while by the check to importation the demand for those bills would be lessened; both causes operating to restore the exchange to its natural level or par. In the same manner, a favourable exchange will act as a duty upon exportation, and as a bounty upon importation. In the case of the *nominal* exchange, however, these effects would not be produced, as the same fall in the value of the currency which renders the exchange unfavourable, and causes foreign bills to sell at a premium, must increase *in an equal degree* the price of all commodities; and *vice versa.*

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* The balance of trade and the balance of payments are here assumed to be identical,—a supposition true in the general case, and convenient for illustration. When, however, two countries sell to each other on unequal terms of credit, these two balances may be materially different; and, as it is by the balance of payments that the market rate of exchange is regulated, their distinction must be borne in mind,—more especially in reference to the exchanges of this country, in which the exporters almost invariably allow a much longer credit than is received by the importers. The balance of trade between the United States and Great Britain is believed to have been in favour of the latter from the date of planting the first British colony in America,—of late years to the amount sometimes of one hundred millions of dollars or upwards; yet, owing to the longer credit allowed by our traders, the exchange has not always been in our favour, but, on the contrary, has been so controlled by the balance of payments as frequently to have been against us.

In exporting during an unfavourable state of the exchange, it is plain that the merchant will, as in the ordinary conduct of his business, select those commodities which, besides the premium afforded by his bill, will give him the greatest profit by the difference of price abroad and at home; and it is not difficult to see that these exports must generally consist of consumable produce, and not bullion, which of all commodities is that which is subject to the least variation in its *real* price. "The annual quantity produced from the mines is very nearly constant,—its distribution, from the facility with which it is transported, is exceedingly uniform,—and its value, and consequently its real price, throughout Europe at least, must be considered as nearly the same. Unless then the bounty afforded by the unfavourable state of the *real* exchange were greater than the expenses attending the transit of bullion, it would be of all others the commodity least likely to be selected by the exporting merchant." (*Blake on Exchange*, p. 21.)

2d, This natural tendency of the exchange to correct itself is promoted by the operations of the bill merchants, who study the exchanges, not only between the place at which they reside and all other places, but also between all those other places themselves, by which means they are generally enabled to realize a profit by buying bills in one place and selling them in another;—in this way preventing any great fall in the price of bills in those countries in which the supply exceeds the demand, and any great rise in those countries in which the supply happens to be deficient. Sometimes exchange operations are conducted with little outlay of capital. Thus, if a bill merchant in London can sell a bill on Amsterdam at half per cent. premium, and buy one at Paris at half per cent. discount, and with the latter buy one at Paris on Amsterdam at par, he will have gained 1 per cent. by the transaction, without the employment of any capital;—the bill remitted from Paris to Amsterdam arriving in time to meet the bill drawn there upon his correspondent. Again, a bill merchant, in order to take advantage of a premium on the exchange, may obtain a credit abroad upon which he may draw bills, under the calculation that at some future and not very distant period he will be able to replace the funds at a lower rate of exchange, and thereby realize a profit by the operation. The central points for such transactions are Hamburg, Amsterdam, Vienna, Paris, New York, and above all, London, the great money change of the world.

3d, A variety of other expedients are also occasionally adopted, particularly in the United States, where the extension of credits by the consent of the foreign creditors upon allowing interest for the extended term, and the transmission of public securities, bank, railroad, and canal shares, are all well known levers in the mechanism of trade, by which the tendency of an unfavourable balance of payments to cause an exportation of bullion is frequently neutralized.

4th, When all these measures fail in keeping down the price of bills, and the premium exceeds by a very small amount the expenses of the transit of bullion, its exportation will immediately commence; for the same uniformity of value and of price which, as already noticed, would prevent bullion being exported before the premium exceeded those expenses, would be the very cause why, as soon as the premium had exceeded that point, it would be immediately chosen as the most eligible for exportation, more especially in the greater exchange markets, where the bullion merchants are generally distinguished for intelligence, large capital, and the small profits upon which they transact their business. The foreign debt will then begin to be paid by the bullion merchants exporting to take advantage of the premium, and their competition will soon bring down the real exchange so as no longer to afford a profit upon the export of this article. The exporters of consumable produce will, during this period, co-operate with the bullion merchants; and when the latter have ceased to derive a profit, the former will still continue their operations, till the exports have been such as to counterbalance the adverse debt, and render the quantity of foreign bills in the market equal to the demand.

5th, Only a small part, however, of an unfavourable balance can be liquidated by the transit of bullion, as its exportation cannot take place to any considerable degree without affecting the market price of that article itself;—raising it in the country from which it is sent, and reducing it in that into which it is flowing; so that if, in the first instance, the difference of price in the home and foreign market were but just sufficient to induce the bullion merchant to export, it is clear that after the change has taken place, the exportation of bullion under the same rate of exchange will cease. "The transit of bullion," says Mr Blake, "from a high or low *real* exchange is an unnatural transit, not arising from the wants of the country into which it flows, but depending solely on the profits which a temporary pressure for foreign payments affords to the bullion merchants on the sale of foreign bills; and as soon as the cause that has produced the temporary influx subsides (an event that will sooner or later necessarily take place by the import of such ordinary produce as is wanted for the purposes of consumption, and increased enjoyment of the people), the superfluous and unused quantity of bullion that has been accumulated will flow back from the country where its abundance has rendered its real price low, to those nations from which it had been unnaturally sent, and where its scarcity will have rendered its real price high." (P. 33.)

Hence it appears, that whenever there is a balance of payments due by a country, the *real* exchange will become unfavourable, and the price of foreign bills will bear a premium, and *vice versa;* that the natural limit to the amount of this premium is the expense of the transit of bullion; and before it has arrived at that point, the export of ordinary produce will be forced, and its import restrained; so that the *real* exchange can scarcely begin to deviate from par, without calling into action a principle that will correct its deviation.

THE COMPUTED EXCHANGE.

The *computed*, or actual course of exchange, depends on the combined effect of the nominal and real exchange. These being perfectly independent of each other, it is obvious that if both are favourable, or both unfavourable, the *computed* exchange will denote their sum; that if the one is favourable while the other is unfavourable, it will express their difference; and that it may be at par, though neither the real nor the nominal exchange are so, provided the unfavourable state of the one be counteracted by the favourable state of the other. The state of the exchange at any particular period is best ascertained by a comparison of the market with the mint price of bullion;—the excess of the former above the latter affording in general an accurate measure of the depreciation of the currency. Thus, if the market and mint price of bullion at London and New York exactly corresponded, and if the value of bullion were the same in both places, the *nominal* exchange would be at par, and whatever variations might occur in the *computed* or actual course of exchange, would have to be referred to fluctuations in the *real* exchange, or in other words, in the demand and supply of bills. But if, when the market price of bullion in London is equal to its mint price, it exceeds it 10 per cent. in New York, this proves that New York currency is depreciated 10 per cent., and consequently the *nominal* exchange between London and New York must be 10 per cent. against the latter. Again, if while the value of New York currency was 10 per cent. less than the value of British currency, the *computed* or actual course of exchange between London and New York was 12 or 13 per cent. against the latter, it would show that the *real* exchange was also against New York to the extent of 2 or 3 per cent.: On the other hand, if the *computed* exchange was only 5 or 6 per cent. against New York, it would show that the *real* exchange was 5 or 4 per cent in its favour.

The oscillations of the exchange are now unimportant compared with what they were during the last war, when most of the European governments resorted to inconvertible paper money, which, by its overissue and consequent depreciation, disturbed the *nominal* exchange, while the *real* exchange was generally more or less influenced by remittances for the maintenance of troops abroad, or on account of foreign subsidies. At present the rates in Wetenhall's "Course of the Exchange," given below, are all expressed in currency, either metallic, or directly convertible into metallic money, except those on Rio Janeiro, Bahia, and Buenos Ayres, where it consists almost entirely of depreciated paper; the currencies of

Denmark, Sweden, and Norway consist chiefly of depreciated paper, but these countries have seldom a direct course with London, their exchange business being generally transacted in banco through the medium of Hamburg. The *real* exchange is now also, in ordinary times, maintained with considerable steadiness; the chief fluctuations to which it is liable arising from the effects of favourable or unfavourable seasons on the customary produce of the land. In this country a deficient harvest, actual or anticipated, leads directly to a demand for bills on the foreign wheat ports, and indirectly to a demand for paper upon all places which hold commercial intercourse with such ports, or through which remittances may be made. The unfavourable exchange thus produced, occasions commonly an exportation of bullion; but it is evident, on the principles already explained, that this efflux can be only of limited amount and temporary duration.

Besides the circumstances now explained, the price of a bill will of course be influenced by the credit of the parties to it, and by the time which it has to run. In the actual negotiation of bills, however, any small difference of time is not taken into consideration,—a bill at 90 days' date frequently bringing as good a price as one at 75 days' date. *Short* bills, that is, bills at sight, or at short sight, which is generally 3 days' sight, do not usually bear a price higher than long-dated bills, proportional to the interest for the difference of time, as the latter are preferred for exchange speculations, from their affording an opportunity to wait, if it should be judged expedient, for an improvement in the rate.

In this country the buying and selling of bills on foreign countries is conducted by brokers, all such transactions centring in the metropolis. In London the days for the negotiation of foreign bills are Tuesdays and Fridays, the *Foreign post-days.* The brokers go round to the principal merchants, and discover whether they are buyers or sellers; and a few of the more influential, after ascertaining the state of the market, suggest a price at which the greater part of the transactions are settled, with such deviations as particular bills may be subject to from their high or low credit. For the bills they buy on one post-day, houses of established credit pay on the following post-day, when they receive the second and third bills of the set;—foreign bills being usually drawn in sets of three. The brokerage charged on bills is 1 per mille, or $\frac{1}{10}$th per cent.

On the evenings of Tuesdays and Fridays, the market rates for bills on all the principal foreign cities, with the current prices of bullion, are published in Wetenhall's "Course of the Exchange," from which the following is extracted:—

COURSE OF EXCHANGE, LONDON, FEBRUARY 11, 1840.

	Time.	Rates.		Explanations.
Amsterdam	3 m/d.	12	4½	Florins and Stivers for £1.
Ditto, at sight	short	12	1½	Florins and Stivers for £1.
Rotterdam	3 m/d.	12	5	Florins and Stivers for £1.
Antwerp	....	12	5	Florins and Stivers for £1.
Hamburg	....	13	12	Marks and Schillings Banco for £1.
Altona	....	13	12½	Marks and Schillings Banco for £1.
Paris, 3 days' sight	short	25	40	Francs and Centimes for £1.
Ditto	3 m/d.	25	65	Francs and Centimes for £1.
Marseilles	....	25	65	Francs and Centimes for £1.
Bordeaux	....	25	70	Francs and Centimes for £1.
Frankfort (Maine)	....		150¾	Batzen for £1.
Berlin	....	7	0	Dollars and Groschen for £1.
Vienna	3 m/d.	10	4	Florins and Kreusers (*effective*) for £1.
Trieste	....	10	6	Florins and Kreusers for £1.
Leghorn	....	30	60	Tuscan Lire and Centesimi for £1.
Genoa	....	25	80	Lire Nuove and Centesimi for £1.
Milan	....	31	0	Lire Austriachi and Centesimi for £1.
Venice	....		47	Pence for 6 Lire Austriachi.
Naples	....		41¾	Pence for 1 Neapolitan Ducat.
Palermo	....		123	Pence for 1 Oncia.
Madrid	....		37	Pence for 1 Dollar of Plate.
Cadiz	....		36½	Pence for 1 Dollar of Plate.
Barcelona	....		36	Pence for 1 Dollar of Plate.
Gibraltar	....		48	Pence for 1 Hard Dollar.
Lisbon	60 d/d.		54¾	Pence for 1 Milreis.
Oporto	....		55	Pence for 1 Milreis.
Petersburg	usance		37½	Pence for 1 Silver Ruble.
Rio Janeiro	60 d/s.		27	Pence for 1 Paper Milreis.
Bahia	....		26	Pence for 1 Paper Milreis.
Buenos Ayres (?)	....		5	Pence for 1 Paper Dollar.
NewYork	21 d/s.		46½	Pence for 1 Dollar.
Philadelphia	....		46	Pence for 1 Dollar.

PRICE OF BULLION.—Foreign gold in bars (standard), per ounce £3 17 9
Silver in bars (standard) 0 5 0¾

When the exchange becomes more favourable to London, the foreign rates in the upper part of the list will rise, the sterling rates in the lower part will fall; when the exchange becomes less favourable, the former will fall, the latter will rise. Again, the tendency of bullion is to fall in price as the exchange becomes favourable, and to rise as it becomes unfavourable.

The Inland Exchange.—The principles now explained are all applicable to the inland exchange; but, in the United Kingdom at least, the uniform value of the currency renders unnecessary any comparison between the value of the money at the place where the bill is drawn with its value at the place where it is to be paid; while the constant intercourse maintained between the different parts of the country prevents those fluctuations which occur in the market price of foreign bills. Inland remittances are generally conducted by bankers, who, by having credits in London and other cities, are enabled on all occasions to supply the demands of their customers. The great centre of the inland as well as of the foreign exchange is London, occasioned partly by its immense commerce, and by its currency consisting of Bank of England paper, for which the notes of the country banks are rendered exchangeable, but chiefly by its being the seat of the government, and the place to which the revenue is remitted. Owing to these circumstances, the exchange between the capital and the other parts of the kingdom is invariably in its favour. The premium for bills on London, or rather letters of credit, the form in which inland remittances are now chiefly made, is usually commuted for a fixed period of time, termed the *Par Date.* The par date for remittances to London from Edinburgh or Glasgow (exclusive of the 3 days of grace), is 20 days; while in London, bills or letters of credit on these places are commonly granted without charge. In Liverpool, the banks draw on London at 21 days' date; sometimes also at 7 days' sight, charging ¼ per cent. of commission. In Dublin and Belfast, bills on London are drawn at 21 days' date, and letters of credit are granted for a premium of ¼ per cent.

FORMULÆ FOR EXCHANGE CALCULATIONS.

The rules for performing exchange calculations having been already fully explained, under the head Chain Rule, we shall here confine ourselves merely to a selection of formulæ; giving, in the first place, those applicable to direct remittances, and afterwards a few examples in indirect exchanges and bullion operations.

DIRECT EXCHANGES.

LONDON ON AMSTERDAM.

Exchange 12 fl. 4½ stivers.
1000 florins?
1 florin = 20 stivers.
244½ stivers = £1.
Or what is the same;
Exch. 12 fl. 22½ cents.
1000 florins?
1 florin = 100 cents.
1222½ cents = £1.
Answer. 1000 florins = £81, 16s.

LONDON ON PARIS.

Exch. 25 fr. 65 cts.
1000 francs?
1 franc = 100 cents.
2565 cents = £1.
Ans. 1000 francs = £38, 19s. 8¾d.

LONDON ON HAMBURG.

Exch. 13 mks. 12 schill. B$^{co.}$
1000 marks B$^{co.}$?
1 mark B$^{co.}$ = 16 schillings.
220 schillings = £1.
Ans. 1000 B$^{co.}$ marks = £72, 14s. 6½d.

LONDON ON LUBEC.

Exch. { On Hamburg, 13 mks. 12 schill. B$^{co.}$
On Lubec, 24 per cent.
1000 current marks?
124 cur. marks = 100 marks B$^{co.}$
1 mark B$^{co.}$ = 16 schillings.
220 schillings = £1.
Ans. 1000 cur. marks = £58, 9s. 7d.

AMSTERDAM ON LONDON.

Exchange 11 fl. 95 cents.
£100?
£1 = 1195 cents.
100 cents = 1 florin.
Answer. £100 = 1195 florins.

N.B. The stiver is retained in the London, but not in the Amsterdam course of exchange.

PARIS ON LONDON.

Exch. 25 fr. 10 cts.
£100?
£1 = 2510 cents.
100 cents = 1 franc.
Ans. £100 = 2510 francs.

HAMBURG ON LONDON.

Exch. 13 mks. 7 schill. B$^{co.}$
£100?
£1 = 215 schillings.
16 schillings = 1 mark B$^{co.}$
Ans. £100 = 1343 marks 12 schill. B$^{co.}$

LUBEC ON LONDON.

Exch. { On Hamburg, 13 mks. 8 schill. B$^{co.}$
On Lubec, 23½ per cent.
£100?
£1 = 216 schill. B$^{co.}$
16 schill. B$^{co.}$ = 1 mark B$^{co.}$
100 marks B$^{co.}$ = 123½ cur. marks.
Ans. £100 = 1667 cur. mks. 4 schill.

LONDON ON VIENNA.

Exch. 10 florins 4 kreusers.
1000 florins?
1 florin = 60 kreusers.
604 kreusers = £1.
Ans. 1000 fl. = £99, 6s. 9d.

LONDON ON VENICE.

Exch. 47 pence.
1000 Lire Aus.?
6 Lire Aus. = 47 pence.
240 pence = £1.
Ans. 1000 Lire Aus. = £32, 12s. 9⅓d.

LONDON ON MILAN.

Exch. 31 Lire Austriachi.
1000 Lire Aus.?
1 Lira Aus. = 100 centesimi.
3100 cent. = £1.
Ans. 1000 Lire Aus. = £32, 5s. 2d.

LONDON ON NAPLES.

Exch. 41¼ pence.
1000 ducats?
1 ducat = 41¼ pence.
240 pence = £1.
Ans. 1000 ducats = £171, 17s. 6d.

LONDON ON LISBON.

Exch. 54¾ pence.
1000$000?
1 $000 = 54¾ pence.
240 pence = £1.
Ans. 1000 milreis = £228, 2s. 6d.

LONDON ON BERLIN.

Exch. 7 Pruss. dol.
1000 P. D.?
1 Pruss. dollar = 30 groschen.
210 groschen = £1.
Ans. 1000 P. doll. = £142, 17s. 1¾d.

LONDON ON ST PETERSBURG.

Exch. 37½ pence.
1000 rubles?
1 ruble = 37½ pence.
240 pence = £1 sterling.
Ans. 1000 rubles = £156, 5s.

LONDON ON PALERMO.

Exch. 123 pence.
1000 oncie?
1 oncie = 123 pence.
240 pence = £1 sterling.
Ans. 1000 oncie = £512, 10s.

LONDON ON MADRID.

Exch. 37 pence.
1000 Reals v.?
32 Reals vellon = 17 Reals plate.
8 Reals plate = 37 pence.
240 pence = £1 sterling.

Multiply by the rate and by 17, and divide by 61440.

Ans. 1000 Reals v. = £10, 4s. 9d.

LONDON ON LEGHORN.

Exch. £ T. 30, 60 cents.
1000 Lire T.?
1 Tuscan lira = 100 cents.
3060 cents = £1.
Ans. 1000 Lire T. = £32, 13s. 7d.

LONDON ON NEW YORK.

Exch. 11½ per cent. Premium.
$1000?
$111½ less prem. = $100.
$40 = £9 sterling.
Ans. $1000 = £201, 15s. 10½d.

Exch. 46½ pence.
$1000?
$1 = 46½ pence.
240 pence = £1 sterling.
Ans. $1000 = £193, 15s.

VIENNA ON LONDON.

Exch. 9 florins 48 kreusers.
£100?
£1 = 588 kreusers.
60 kreusers = 1 florin.
Ans. £100 = 980 florins.

VENICE ON LONDON.

Exch. 48 pence.
£100?
£1 = 240 pence.
48 pence = 6 Lire Aus.
Ans. £100 = 3000 Lire Austriache.

MILAN ON LONDON.

Exch. 29 Lire 30 cents Aus.
£100?
£1 = 2930 centesimi.
100 cent. = 1 Lira Aus.
Ans. £100 = 2930 Lire Austriachi.

NAPLES ON LONDON.

Exch. 610 grani.
£100?
£1 = 610 grani.
100 grani = 1 ducat.
Ans. £100 = 610 ducats.

LISBON ON LONDON.

Exch. 57 pence.
£100?
£1 = 240 pence.
57 pence = 1 $000.
Ans. £100 = 421 $053.

BERLIN ON LONDON.

Exch. 6 P. D. 24 groschen.
£100?
£1 = 204 groschen.
30 groschen = 1 Pruss. dollar.
Ans. £100 = 680 Prussian dollars.

ST PETERSBURG ON LONDON.

Exch. 38 pence.
£100?
£1 = 240 pence.
38 pence = 1 ruble.
Ans. £100 = 631 rubles 58 copecs.

PALERMO ON LONDON.

Exch. 60 tari.
£100?
£1 = 60 tari.
30 tari = 1 oncie.
Ans. £100 = 200 oncie.

MADRID ON LONDON.

Exch. 36 pence.
£100?
£1 = 240 pence.
36 pence = 8 Reals plate.
17 Reals plate = 32 Reals vellon.

Multiply by 61440, and divide by the rate multiplied by 17.

Ans. £100 = 10039 Reals v. 7 maraved.

LEGHORN ON LONDON.

Exch. £ T. 30, 10 cents.
£100?
£1 sterling = 3010 cents.
100 cents = 1 Tuscan Lira.
Ans. £100 = £ T. 3010.

NEW YORK ON LONDON.

Exch. 7½ per cent. Premium.
£100?
£9 sterling = $40
$100 plus prem. = $107½.
Ans. £100 = $477·78 cts.

Exch. $4·80 cts.
£100?
£1 sterling = 480 cents.
100 cents = $1.
Ans. £100 = $480.

In the two examples of the premium method, given above, the fixed par of 4s. 6d. per dollar is expressed in the equivalent proportion, £9 = $40, according to usage in exchange calculations.

LONDON ON MONTREAL.

Exch. 17½ per cent. premium.

£1000 currency?

£117, 10s. currency, less prem. = £100 currency.

£10 currency = £9 sterling.

Ans. £1000 currency = £765, 19s. 9d. sterling.

LONDON ON JAMAICA.

Exch. 18 per cent. Premium.

£1000 currency?

£118 currency, less prem. = £100 currency.

£7 currency = £5 sterling.

Ans. £1000 currency = £605, 6s. 6½d. sterling.

MONTREAL ON LONDON.

Exch. 15 per cent. Premium.

£100 sterling?

£9 sterling = £10 currency.

£100 currency, plus prem. = £115 currency.

Ans. 100 sterling = £127, 15s. 7d. currency.

JAMAICA ON LONDON.

Exch. 15 per cent. Premium.

£100 sterling?

£5 sterling = £7 currency.

£100 currency, plus prem. = £115 currency.

Ans. £100 sterling = £161 currency.

INDIRECT EXCHANGES, OR ARBITRATIONS OF EXCHANGE.

Arbitration of Exchange is the operation of finding a proportional rate between two places, through any intermediate place or places, in order to ascertain the most advantageous method of drawing or remitting. When there is only one intermediate place, it is said to be a *Simple Arbitration;* when more than one, a *Compound Arbitration.*

In practice the comparison is made with a variety of arbitrated rates, in order to find whether any indirect paper affords a better rate than direct paper,—allowance being made for the difference of interest or discount between the direct and indirect bills, and the additional charges attending the latter, as brokerage, stamps, and commission. The commission to an agent varies from about ¼ to ½ per cent. according to agreement; but the small rate of profit yielded by exchange speculations leads to their being chiefly conducted on joint account, or between branches of the same establishment, so that the charge for commission is generally avoided.

LONDON AND PARIS, THROUGH HAMBURG.

Find the Arbitrated Rate between London and Paris, when the exchange of London on Hamburg is 13 marks 12 schillings Banco for £1; and that of Paris on Hamburg, 184 francs 50 centimes for 100 marks Banco.

£1?

£1 = 220 schillings Banco.

16 schillings = 1 marc Banco.

100 marcs Banco = 18450 cents.

100 cents = 1 franc.

Ans. 25 francs 37 cents.

LONDON AND AMSTERDAM, THROUGH MADRID.

Find the Arbitrated Rate between London and Amsterdam, when the exchange of London on Madrid is 37 pence for 1 dollar of plate; and that of Amsterdam on Madrid 100 florins 75 cents for 40 ducats of plate.

£1?

£1 = 240 pence.

37 pence = 1 dollar plate.

1 dollar plate = 272 maravedis.

375 maravedis = 1 ducat.

40 ducats = 10075 cents.

100 cents = 1 florin.

Ans. 11 florins 85 cents.

In the Simple Arbitrations now stated, although the exchange is said to be *through* a third place, yet it is commonly effected by the remittance of bills upon the intermediate place, to the place where the fund is to be created;—as, for example, by the purchase in London of bills upon Hamburg, and the remittance of such bills to Paris; this operation being less complicated, and attended with fewer charges than remitting direct paper to Hamburg, and either having the proceeds forwarded to Paris, or ordering the correspondent there to draw for them upon Hamburg.

Compound Arbitrations are of rare occurrence, as the liability to unfavourable changes becomes greatly increased when more than three places are concerned in the operation; besides, few houses of business are capable of so far extending their negotiations.

ARBITRATIONS OF BULLION.

Arbitration of Bullion is the operation of deducing a rate of exchange from the prices of bullion in two places, in order to determine, by comparison with the rate borne by bills, whether the precious metals can be exported or imported to advantage. The data required, besides the prices, are the weight and fineness of the bullion;—the modes of expressing which, in this and other countries, are explained under MEASURES AND WEIGHTS, and the heads of those countries respectively.

In the following equations the variable terms are distinguished by an asterisk; the others, being invariable, are in each case compounded into a fixed number which may be used in all similar arbitrations. The result of the equation for New York is shown, both according to the new and the old methods of quoting the exchange.

LONDON AND NEW YORK.

Bar gold in London is 77s. 9d. per ounce standard; required the arbitrated rate of exchange produced by its export to the United States, for coinage at the rate of 232⅕ grains of fine gold for the eagle of $10.

£1 sterling?

£1 sterling = 20 shillings.

*77¾ shillings = 480 grains stand.

12 grains stand. = 11 grains fine.

232⅕ grains fine = $10.

77¾)378·984 *Fixed No.*

Ans. $4·87,43 per £1 sterling.

900

40)4386·87,00

109⅝ per £100 ster.

or 9⅝ per cent. Premium.

LONDON AND AMSTERDAM.

Bar silver in London is 60 pence per oz. standard; in Amsterdam 104½ florins per pond fine; required the arbitrated rate of exchange; the Netherlands pond being equal 1000 wigties, and 31·1002 wigties equal 1 troy ounce.

£1 sterling?

£1 sterling = 240 pence.

*60 pence = 1 oz. standard.

40 oz. standard = 37 oz. fine.

1 oz. = 31·1002 wigties.

1000 wigties = *104½ florins.

60)6·90424 *Fixed No.*

·115070

Multiplied by 104½

Ans. Florins 12·02 cents.

The arbitrated rates thus found, however, will fall to be corrected for interest and charges, before being compared with the prices of bills.

EXCHEQUER, a court established in England by William the Conqueror, and which anciently was one of the first in importance, as all causes relating to the rights of the crown were there discussed, and the royal revenues were supposed to be received there. As now modified, it consists of two divisions, one of which possesses jurisdiction in matters of public revenue, while the other is subdivided into a court of common law and a court of equity. The judges are, the Chancellor of Exchequer for the time being, the Chief Baron, and four other Barons. The Chancellor has a voice in giving judgment when the court sits in equity, but it is now rarely or never exercised, his leading duties at present being those of the public finance, of which he is minister. In this last capacity he is always a leading member of the cabinet.

EXCHEQUER BILLS are promissory-notes issued by the Treasury under the authority of Parliament; and are the form in which the floating or unfunded part of the national debt chiefly exists. The issue of these bills greatly facilitates the current financial business of the government. They are circulated at present for sums varying from £100 to £1000, which are printed with ink of different colours; namely, £100 bills with red; £200, yellow; £500, blue; and £1000 bills with black ink. They bear interest from their date until the day fixed for their payment, which is announced by advertisement, and is generally about a year after being issued, when they are either discharged or renewed for other bills, at the option of the holders. Parties neglecting to present their bills on the day appointed are deprived of interest till the next opportunity of obtaining new bills, or else must submit to the loss of whatever premium they may chance to bear at the time. During the currency of these bills, they may, after a limited time, be paid to the government at par in discharge of duties and taxes; they are thus nearly exempt from the risk of depreciation, and, as they are transferable without the necessity of a formal assignation, they form an eligible investment for capital that may require to be suddenly made available. They are so much in demand by capitalists in the metropolis, that government is enabled to keep a considerable amount of them, generally about £28,000,000, in circulation, at a low rate of interest. The rate is fixed at so much per cent. per diem, and is commonly adjusted so that the bills shall bear a premium in the market, in order that government may not be exposed to the inconvenience of having them returned in payment of taxes. Sometimes the small bills bear a higher premium than the large ones. Of late years the rate has fluctuated from 1½d. to 2½d. per cent. per diem, that is, from £2, 5s. 7½d. to £3, 16s. 0½d. per cent. per annum.

The brokerage upon either a purchase or a sale is 1s. per cent.

Transactions through the medium of Exchequer bills generally involve a calculation of interest and premium. Thus,

To find the cost of an Exchequer bill for £500, dated January 5, and sold April 6, at 60s. premium, we have

	£500			Bill.
£500 at 2d. per cent. is 10d.: and 10d. × 91 days =	3	15	10	Interest
60s. × 5 =	15	0	0	Premium
	0	5	0	Brokerage
	£519	0	10	Whole cost.

These securities are issued at the Exchequer Bill Office, Palace-Yard, Westminster. [FUNDS.]

EXCISE, a term applied in this country to the duties levied on articles of home manufacture or production. Such duties were unknown in England before the year 1643, when they were imposed by the Long Parliament upon beer, ale, cider, perry, and other commodities. This kind of taxation long continued unpopular. Marvel describes the excise as "a hateful tax;" and Blackstone states, that, "from its first original to the present time (1765), its very name has been odious to the people of England." These opinions may have partly arisen from the harsh and inconsiderate manner in which the duties were sometimes levied; but there will always be clamourers against even beneficial innovations. Few persons, however, are now disposed to call in question the advantage of contributing towards the necessary expenses of the country by means of an indirect tax, though this is an advantage which may be purchased at too dear a rate, if great care be not taken in the construction of statutes which give such large powers as the excise laws.

The excise was at first only intended to be resorted to as a temporary source of revenue, but, like many other taxes, it was retained when the emergency in which it originated had passed away. In 1649, the Parliament declared that "the impost of the excise was the most easy and indifferent levy that could be laid upon the people;" and by the 12th Charles II. c. 24, it was granted as part of the revenues of the crown. The malt duty was first imposed in 1695; and during the reigns of William III. and Queen Anne, the list of articles subject to the excise comprised nearly all those which were liable at the close of the last century. In 1797, the number was 27; in 1833, they were reduced to 15; and in 1837, to 10, their present number, either by the duty having been totally repealed, or (as in the case of tea, cocoa, coffee, pepper, foreign spirits, tobacco, snuff, and wine) by being transferred to the department of the customs, which is enabled to collect the revenue with greater economy and convenience. The articles from which the excise revenue is at present derived are, Auctions, Bricks, Glass, Hops, Licenses, Malt, Paper, Soap, Spirits, and Vinegar; and under these heads, and those of Tariff, and Revenue and Expenditure, an account will be found of the different duties and their produce.

The persons subject to excise survey may be divided into five classes:—1. Persons visited for the purpose of charging the "growing" duties, as brickmakers, maltsters, papermakers, and others. 2. Persons whose license is high or low according to the extent of their consumption, as brewers and tobacco manufacturers. 3. Persons visited because subject to a license for dealing in articles upon which excise duty has or ought to have been paid, as innkeepers, and retailers of beer or spirits. 4. Persons visited in like manner because subject to a license for dealing in articles chargeable with customs duty, as dealers in tea, wine, and tobacco. 5. Persons from whom no duty is collected, as tallow-melters (as a check on soap-making), and a few others. The total number of parties surveyed in the United Kingdom is about 600,000.

The Board of Excise is a sub-department of the Treasury, and as such is subject to its check and control; the First Lord of the Treasury and the Chancellor of Exchequer being the really responsible parties. It consists of seven commissioners who have equal authority and power. The chairman has a salary of £2000, the deputy-chairman £1500, and the other commissioners have each £1200 per annum. The board is responsible for the general discipline of the service, amounting to about 7000 individuals. They appoint to offices, and pay the parties such sums as are necessary; but the number of each description of officers is not allowed to exceed that fixed by general warrant or order from the Treasury. Since 1823 the Irish and Scottish boards have been consolidated with the English establishment.

To facilitate the labours which devolve upon the excise department, the country is partitioned into convenient portions, known under the name of "collections;" the number of these in England and Wales being 55. The name of a county, a large portion or the whole of which is comprised within its limits, is given to some collections; others are known by the name of some great town which they contain. Each collection is divided into districts, usually into six or seven. Each district again is subdivided into rides and footwalks; the former comprises a tract of country in which the traders are thinly scattered, and the surveying officer is required to keep a horse; the latter never exceeds a circuit of 16 miles.

The chief officer of each collection is the collector, who is allowed a clerk; and in two or three collections more than one clerk is required. The officer next in point of rank is the supervisor, who is in charge of a district; and afterwards come the ordinary surveying officers. There is always one supernumerary in each collection, and in many there are officers called assistants and expectants. The salaries of collectors vary from £350 to £550, the general rate being £400 a-year. The salary of supervisors is £200; of officers, £100; of assistants, £85; of supernumeraries, £52; of collectors' clerks from £115 to £150; of expectants £50 a-year. When these last are employed as officers, they receive an additional allowance at the rate of £30 a-year; and supernumeraries in like manner receive an addition of £38 a-year. The collectors find security to the amount of £5000; supervisors provide a bond of £1000; and all other classes in the service give security to the amount of £200.

The following is an Abridgment of the Statutes under which the Excise Establishment is regulated—7 & 8 Geo. IV. c. 53; 4 & 5 Wm. IV. c. 51; and 4 & 5 Vict. c. 20.

Commissioners and other Officials.—The crown is empowered to appoint commissioners, not exceeding thirteen in number, for the collection and management of the excise duties of the United Kingdom; they are subject to the directions of the Treasury. The Treasury have the appointment of a comptroller and auditor for the United Kingdom. The commissioners appoint the proper collectors, officers, clerks, and others, for the collection of the duties, not exceeding the number fixed by a general order from the Treasury. They promote, suspend, and dismiss officers, and regulate their salaries, allowances, and expenses. No person, holding any office in connexion with the excise, is to deal in excisable commodities, under penalty of forfeiture of his office, and incapacity to fill any other connected with the excise. Any officer connected with the excise who asks or takes a bribe directly or indirectly, or enters into an agreement, to conceal or connive at any infringement of the excise laws, or to omit performing his duty, is liable to a penalty of £500, and to be rendered incapable of serving in any government office. The same pecuniary penalty is incurred by any individual who may corrupt or attempt to corrupt an officer to such breach of duty. When any such punishable transaction takes place between a private party and an officer connected with the excise, either party giving prior information which leads to the conviction of the other is indemnified. Where officers would share in penalties or forfeitures, if they are found to have acted collusively, as above, or negligently, they lose their portion.

Entry of Premises, &c.—Every person obliged by any excise act to make entry of his premises or utensils, does so by giving an account, according to the terms of the particular excise act, to the officer of the survey, to be entered in the general entry-book; the penalty for omission is £200. A person employing entered premises, for other purposes than those for which they are entered, forfeits £100. No *second* entry can be made in name of any one but a partner; but if any person vacate his premises without withdrawing his entry, the commissioners may consider it withdrawn, and permit a new one. The entry must be made by a person who has attained the age of twenty-one, and by the real owner; but whoever makes it, or uses the premises, is responsible. Entry by a joint-stock company or corporation must be made by *the managers*, or four of them if they exceed that number. Every entered building, place, or utensil, must be distinguished by a number painted on a conspicuous part of it, and the proprietor must paint all fixed pipes, and describe their direction and purpose at the requisition of the surveyor, under penalty of £100. A book called "a specimen" may be deposited in any entered premises, for recording the entries of the officers who survey the premises, and any person other than an officer of excise secreting, carrying away, destroying, or making entries in, this book, is liable to a penalty of £200.

Duties.—Persons carrying on business subject to excise regulations delaying to pay the duties when demanded forfeit double the value of the duties. The collector, on affidavit, may grant warrant for levying unpaid duties, in the same manner as penalties are levied, reporting to the commissioners, who may stay the proceedings or grant relief.

Officers of excise are entitled to enter on premises used for any business subject to excise regulations, and to take account of and charge any duties they may find chargeable, at any time, by night or day; but if the entrance is to be made at any time between eleven at night and five in the morning, it must be by request, and in presence of a constable, unless a different rule be established by any excise act applicable to any particular commodity. All excisable commodities, and utensils used in their preparation, are at all times liable for the duties, and arrears of duties, and penalties and forfeitures, incurred by the person who uses them, though they have passed into other hands; but by the last excise statute, effects which have been taken account of, and charged with duty, are not liable, in the hands of a *bonâ fide* purchaser.

Smuggling.—Any person connected with the manufacturing of excisable commodities in unentered premises is liable in a penalty of £30, over and above the penalties which may be leviable on the proprietor by the act applicable to the particular manufacture; and any officer may, either at the time of discovery or afterwards, bring a person discovered in the act before a justice of peace, by whom he may be summarily amerced in the penalty, or, on failure, be imprisoned, with hard labour, for three months. On a second offence, the penalty and imprisonment are doubled. The commissioners alone have the power of modifying the punishment. All excisable commodities and implements concealed with intent to defraud the revenue are forfeited, along with the vessels for containing them, and vehicles and cattle for removing them; and persons concerned forfeit treble the value, or £100, as the commissioners or the informer may decide.

Searching Premises, &c.—Within the limits of the chief office two commissioners, and, in the country, a justice of peace, on an excise officer making oath of suspicion of excisable articles concealed, may grant warrant to search the premises, break down obstructions, and remove excisable commodities, by day or night, but if between eleven at night and five in the morning, only in presence of a constable. Justices of the peace, mayors, bailiffs, constables, and the public at large are required to assist. Any constable, or other ministerial officer of the peace, refusing to assist an excise officer, forfeits £20; the assistance may be continued by such ministerial officer beyond his jurisdiction. Similar powers to the above are conferred on officers of the customs. Persons who obstruct officers or their assistants making seizures, or who attempt a rescue, or injure the commodities seized, forfeit £200. Officers and their assistants assaulted or resisted with offensive weapons, in attempting to make seizures, may oppose force to force; and if in doing so they occasion wounds or death, they may be admitted to bail.

Seized and Forfeited Goods.—Officers of customs seizing excisable commodities, must give notice at the next excise office, or to the supervisor, or other officer of the district, who must take an account of the goods, after which they cannot be removed without a permit. Police officers seizing such commodities, must deposit them in the next excise office, unless when it is necessary to detain them for a time as productions in any criminal trial; a penalty of £20 is incurred by neglect. Goods produced for the purpose of fraudulently obtaining a drawback, are forfeited, along with treble the value, or £100, as the commissioners or the informer may choose. Forfeited goods are publicly sold to the best bidder. No such goods can be sold for home consumption at a less price than the duty; and if such a sum is not offered, they must be sold for exportation, destroyed, or applied to some public use. Goods condemned as being adulterated, or mixed with prohibited ingredients, must be destroyed. Where no claimant appears for effects seized, notice is affixed to the excise office, specifying a day when they are to be adjudicated on. Within the limits of the chief office the notice must be fourteen days after the seizure; and in the country it must be on the next market-day after expiration of six days, and must specify a day and place for the consideration of the case, the day being eight days after the notice. The decision of the commissioners or justices may then be given in absence, as if the parties had appeared. By the last act, effects under £15 in value may be treated as condemned after their being a month unclaimed. Where cattle or goods of a perishable nature are seized, they may be re-delivered to the owner on his giving security; and if the owner do not appear and offer security, any such property may, after the lapse of fourteen days, be sold by auction, without being condemned, the owner having the choice of receiving the proceeds, or the appraised value, if the final decision is in his favour, and a farther sum of compensation for the loss sustained by the seizure, at the discretion of the commissioners.

Prosecutions.—No actions of any description can proceed for any penalty, forfeiture, or condemnation, except by order of the commissioners, or at the instance of the law officers of the crown, summary proceedings for conviction upon immediate arrest excepted. Actions for penalties and condemnations proceed before three or more commissioners within the circle of the chief office, or one or more justices of peace in the country. Information must be presented within four months after the offence or seizure, notice being given to the accused within one week after the exhibiting of the information. The party receives ten days' warning to attend, by summons, except in the case of prosecution for double the value of duties neglected to be paid, when twelve hours' warning is sufficient. The justices of peace, to the number of two or more, are appointed to meet every three months, or oftener if there be occasion, to hear excise prosecutions. No officer of excise can act as a justice; nor can any person carrying on a business subject to excise regulations act in any case relating to that class of business. Convictions contrary to either of these regulations are null. A witness summoned to appear, and having his expenses tendered, is liable to forfeit £50 if he do not appear, or if he refuse to give evidence. Officers of excise and informers are competent witnesses, notwithstanding their right to receive a portion of the penalty or forfeiture, on conviction. In all prosecutions, whether at the instance of the excise, or against any officer of excise, the proof that goods have paid duty, or that they are not of a kind for which duty is exigible, lies on the proprietor or person claiming them. The justices may mitigate penalties down to one fourth part at their discretion; but this does not extend to prosecutions for double the value of duties neglected to be paid. It is to be observed that the separate statutes applicable to the different excisable commodities, impose their respective penalties; and where, by any such act, a penalty is imposed, and, in default of immediate payment, imprisonment for a limited period, the justices cannot mitigate except where they are specially empowered to do so by the terms of the act. The commissioners of excise may mitigate or entirely remit penalties. An appeal lies from the decisions of justices to the next quarter sessions. Where any judgment is for the condemnation of property, it is made effectual by a warrant for sale; and where it is for a penalty, it authorizes it to be levied on the goods of the party by sale, not less than four or more than eight days from the date of the warrant. On a return that sufficient effects have not been found, a warrant is granted to imprison. The law officers of the crown may stop prosecutions, and the commissioners may forbear from prosecuting, or restore seizures, or compromise prosecutions. The Treasury may restore seizures before or after condemnation, and remit penalties before or after judgment. The commissioners may allow a sum not exceeding eightpence per day to excise prisoners. All questions as to arrears of duty, penalties, forfeitures, seizures, &c. belong exclusively to the jurisdiction of the Court of Exchequer, with the exception of the questions which, as above, are decided by commissioners or justices. All prosecutions in the Court of Exchequer must be commenced within three years after the cause of action. In cases which the justices are empowered to decide, no defendant can bring the proceedings before any superior court, but the crown may bring any process into the Court of Exchequer by *certiorari*.

Actions against Officers, &c.—When an action is to be brought against any officer or other person acting under the excise laws, a month's notice in writing must be given, and it must be pursued within three months after the time when the cause of action arose. If the pursuer is unsuccessful, treble costs are awarded against him. Any officer or other person who receives notice of action, may tender amends within a month, and if they be rejected, they may be pleaded in bar of action, and on being deemed sufficient, the verdict will be found for the defender, with treble costs as above. In the case of a seizure, where decision is given for the claimant, the person who made the seizure is not liable to prosecution, if the judge report that there was a probable cause for seizure; and in the case of a verdict against an officer for any such seizure, if the judge give a similar report, the prosecutor becomes entitled to only 2d. of damages, and to no costs.

EXPECTATION OF LIFE, a phrase improperly applied by writers on Life Insurance to the average of forthcoming years in the life of an individual. As explained in the article INTEREST AND ANNUITIES, it is different from the term of probable life.

EXPORTATION. [CUSTOMS REGULATIONS.]

EXTENT, WRIT OF, is a process employed at the instance of the crown for attaching the body, goods, or lands of a debtor. Extent is either in chief or in aid. The former issues against the crown's debtor, the latter against the debtor of the crown's debtor. It is a rule that an extent can only be founded on matter of record, and so if it be required on a simple contract, and without bond, a commission is issued out of the Court of Exchequer, on affidavit of the debt, to two commissioners who are authorized to inquire, with the assistance of a jury, whether the defendant be indebted to the crown in any and what sum, and to return the result of the inquiry to the court. No notice is given to the defendant of the inquiry. Where the debt is on bond, the writ may issue on the showing of the bond, accompanied by an affidavit. The affidavit on which an extent in chief is obtained, termed the affidavit of danger, must state the debt, the manner in which it arose, and the circumstances connected with the debtor's situation, owing to which it is in danger of being lost. The fiat, which is the warrant for issuing the extent, may be obtained at any time from the Chancellor or a Baron of the Exchequer. The writ is tested by the Chief Baron (in Scotland by the judge of the Court of Session who acts as the judge of Exchequer), signed by the Queen's Remembrancer, and sealed with the Exchequer seal. This is termed the *teste*, and the goods affected are bound from its date. The writ in England directs the Sheriff to enter on the defendant's property, take his person, and inquire by jury what lands and tenements, and of what yearly values, he had at the time when he became debtor to the crown, or at any time since (or if it be on a simple contract debt, what he now hath), and what goods or chattels, debts, credits, or other assets, he, or any person in trust for him or to his use has, and to appraise, extend, and seize all such property. It is a peculiarity in Scotland (the Exchequer law of which is in other respects derived from that of England), that real property cannot be affected by a writ of extent. In England, a jury is impannelled to inquire into the funds, and all having an interest may appear. The effect of the writ on third parties is, that the property of the debtor is bound by it from the date of the *teste*, into whatever hands, or for whatever consideration it may pass. All the debtor's property may be taken under the extent, except what is necessary for himself and his family, and excluding beasts of the plough if there be other chattels sufficient. Goods *bona fide* sold, or assigned for the benefit of creditors before the *teste* (though the latter turn out to be an act of bankruptcy), cannot be affected, nor can goods pawned, or on which a factor has been entitled to a lien, before that event. By the English bankrupt laws, the crown's extent is defeated by the choice of assignees, the estate immediately vesting in them. In sequestrations in Scotland, the vesting takes place from the date of the act and warrant in favour of the trustee. Where an extent in chief has been obtained, and debts found due to the crown's debtor, an extent in chief of the second degree may be issued, and against *that* debtor's debtor an extent in chief of the third degree, and so on. An extent in aid is issued for the benefit of a crown debtor, who is himself liable to an extent in chief. By 57 Geo. III. c. 117, §§ 4, 5, such extents are prohibited from being granted for simple contract debts, or to persons who become the crown's debtors by bond in the course of their trade, or as sub-distributors of stamps, or to sureties for crown debts, unless a demand be made from them. Extent in aid may be issued to the third degree. (*West on Extents. Tidd's Practice of King's Bench, &c.* 1042-1083.)

F.

FACTOR, a commercial agent residing at a distance from his principal, and having the superintendence of some branch of his employer's trade in the place where he acts. A factor differs from an ordinary agent in this, that he does not represent his principal, but acts as a principal himself in his transactions with third parties. He is distinguished from a broker, in as far as he has the personal possession and management of the goods over which his superintendence extends. The factor carries on his commercial operations on commission. He receives consignments from his principal, and makes sales and remittances in return, balancing accounts from time to time. He may act without disclosing the name of his principal. He frequently holds a Del Credere commission [DEL CREDERE]. Like other mandatories, the factor is personally responsible for whatever he may do exceeding the powers delegated to him, and where they are not expressed in the terms of his commission, his powers will be limited by the custom of the trade. He is not responsible "at all events" (as it is termed) for the safety of goods within his charge, that is to say, he is not liable for them as if he had insured them against all risks; but he ought to bestow on them the same care as on his own property, and it would appear that he will be amenable to his employer if he do not. He is not in the general case responsible for the consequences of fire, robbery, or other accident, but there are precautions which, in certain circumstances, he must adopt. One of the most important is that of protecting his principal's interest by insurance, and if he have effects in hand, he is in all cases bound to comply with directions to insure, being, on failure, himself considered responsible. Where goods are consigned to a factor, his title to them, and right to dispose of them, is generally conveyed in an indorsed bill of lading, but in questions with parties privy to the transaction, it is held that a letter of advice is sufficient. Where the factor has absolute power to sell, indorsement of a bill of lading while the goods are at sea will pass them absolutely, and bar the principal's right to stop in transitu, "and in the absence of fraud, it seems that the assignee's knowledge of the factor's character would not affect his title; for, in order to make notice material, it must be notice of something inconsistent with the right of the assigner to do the act under which the assignee claims, or of such circumstances as render the bill of lading not fairly and honestly assignable. But, inasmuch as the character of a factor is consistent with the power to sell, the knowledge of this circumstance would not probably be considered as any impeachment of the transaction if it would be otherwise valid" (*Paley*, 239, 240). A factor has a lien on the goods consigned to him, not only for charges affecting those goods, but for his general balance. The lien extends to every portion of the goods, and when they are disposed of, to the proceeds. On parting with possession, the factor abandons the lien, and goods transmitted to him with a specific appropriation are excepted from it. (*Paley on Principal and Agent.*)

Abridgment of the Factor's Act, (6th Geo. IV. c. 94.)

§ 1. Any person intrusted with goods for the purpose of consignment or sale, who ships them in his own name, and any person in whose name goods are shipped, is deemed the true owner, so far as to entitle the consignee to a lien in respect of any money or negotiable security advanced for the use of the person in whose name "such goods, wares, or merchandise shall be shipped, or in respect of any money or negotiable security, or securities received by him, to the use of such consignee, in the like manner, and to all intents and purposes as if such person were the true owner of such goods:" Provided that at or before the advance the consignee shall not have notice by the bill of lading that the person in whose name the goods are shipped is not the actual owner. There is a presumption that the person in whose name goods are so shipped has been intrusted with them for the purpose of consignment or sale, the burden of proving the reverse being thrown on the person disputing the presumption.

§ 2. Any person in possession of a bill of lading, India warrant, dock warrant, warehouse-keeper's certificate, wharfinger's certificate, or other delivery warrant, is held the true owner of the goods it represents, so far as to render valid any contract for the sale, deposit, or pledge in security of advances, of the goods, provided there be no notice, as above, that the holder is not the true owner.

§ 3. But if the deposit or pledge be taken as a security for a prior debt owing by the person in possession, then the individual taking the goods acquires no farther title than could be communicated by the one so parting with the possession of them.

§ 4. Persons are safe in contracting with agents for the purchase of goods intrusted or consigned to them, the contract being binding on the owner, though the purchaser is aware that he has contracted with an agent: "Provided such contract and payment be made in the usual and ordinary course of business," and the party have not notice on entering on the contract, or making payment, that the agent is not authorized to sell the goods or receive the purchase-money.

§ 5. Persons may take goods, or warrants for delivery of goods, in pledge, though they receive notice that the persons from whom they receive them are but factors or agents, but no better right can be acquired in such circumstances "than was possessed, or could or might have been enforced by the said factor or agent, at the time of such deposit or pledge."

§ 6. Provision is made for enabling the principal to recover his property from his factor, before sale or deposit, or from the administrator of the estate on his factor's bankruptcy, or to obtain the money from the purchaser in case of sale, subject to the right of set-off between the purchaser and factor; and to recover property pledged on satisfying the claims of the pawnee respecting it.

§ 7. Factors or agents pledging goods intrusted to them, and applying the money raised for their own use, "in violation of good faith, and with intent to defraud the owner or owners of such goods," become liable to transportation not exceeding fourteen years.

§ 8. The deposit or pledge of goods in security for no greater sum than is covered by the factor's lien is not considered fraud; the acceptance of a bill, however, drawn by or on account of the principal, is not a debt by the principal to justify a pledge in these circumstances unless the bill be paid when it becomes due.

FACTORAGE, the allowance or per centage given to factors by the merchants or manufacturers who employ them; it is fixed by mutual agreement or the usage of trade. [COMMISSION.]

FACTOR, INTERIM, in the law of bankruptcy in Scotland, is the person who has charge of the bankrupt estate till a trustee be chosen. He is elected by a majority of qualified creditors, at a meeting held on a day specified in the writ awarding the sequestration, not less than eight or more than fourteen days from the date thereof. The sheriff decides as to the election in case of dispute. Where an interim factor is not duly elected, his duties devolve on the sheriff-clerk. At the meeting to elect a trustee, he presents his accounts and vouchers, and remuneration may be awarded. If he be dissatisfied with the sum, he may appeal to the sheriff. [SEQUESTRATION.]

FACTORY, an establishment of traders in a foreign land, who are governed by regulations adapted for their mutual protection, against the interference of the governments of the countries in which they reside. Such establishments were common in former times, but they have almost ceased to exist, in consequence of the greater protection now afforded to merchants in foreign parts.

FACTORY SYSTEM. The term factory is now very commonly applied to an establishment in which a number of persons are employed, for the production of some article of manufacture, generally with the aid of machinery. The factory system of Great Britain owes its origin to those mechanical inventions which have led to the development of the cotton manufacture; and it is in the mills in which that manufacture is carried on that the system has been brought to its highest state of perfection. The last general return respecting the number of factories, and the people employed in them, was made in the year 1835, when the number of factories in the United Kingdom was 3236, of which there were employed in the manufacture of cotton, 1304; wool, 1322; silk, 263; flax, 347. The number and ages of the persons working in these factories were as follows:—Between 8 and 12 years, males, 10,087; females, 10,501; total, 20,588: Between 12 and 13 years, males, 17,687; females, 18,180; total, 35,867: Between 13 and 18 years, males, 43,482; females, 64,726; total, 108,208: Above 18 years, males, 87,299; females, 103,411; total, 190,710: Total males, 158,555; total females, 196,818: In all, 355,373; of which there were employed in cotton factories 220,134; in woollen factories, 71,274; in silk factories, 30,682; and in flax factories, 33,283. The proportion of females employed in factories is shown to be much greater in Scotland than in the other parts of the United Kingdom.

A very large proportion of the hands employed in those establishments, it will be seen, consists of children and young persons. There having been reason to believe that, in many cases, they were tasked beyond their strength, an investigation of the practices in this respect was made in 1832 by a parliamentary committee, and subsequently by a royal commission. The examinations which then took place proved that, although the abuses alleged to exist had been greatly exaggerated, enough remained to render legislation expedient; and in consequence an act was passed in 1833 (3 & 4 Wm. IV. c. 103), the chief provisions of which are the following:—

§ 1. No person under 18 years of age shall be allowed to work between 8½ o'clock P.M. and 5½ A.M., except as hereafter, in any cotton, woollen, worsted, hemp, flax, tow, linen, or silk mill or factory, in scutching, carding, roving, spinning, making thread, dressing or weaving of cotton, wool, worsted, hemp, flax, tow, or silk, either separately or mixed, in any such mill, in any part of the U. K. But the act not to extend to the fulling, roughing, or boiling of woollens, nor to any persons employed therein, nor to the labour of young persons above the age of 13 years, when employed in packing in any place attached to a mill, and not used for any manufacturing process, nor to any mill used solely for the manufacture of lace.

§ 2. No person under 18 shall be employed more than 12 hours in one day, nor more than 69 hours in one week.

§ 6. There shall be allowed, in the course of every day, not less than 1½ hour for meals to every person restricted to the performance of 12 hours' work.

§ 7. No child, except in silk mills, shall be employed who shall not be nine years old.

§ 8. No child, except in silk mills, shall be employed more than 48 hours in any one week, nor more than 9 hours in any day, who shall not be 13 years old.

§ 9. Young persons whose hours of work are regulated shall be entitled to Christmas and Good Friday as entire holidays, and not fewer than 8 half-holidays in every year.

§ 11-14. Children whose work is restricted to 9 hours a-day are not to be employed without a medical certificate, countersigned by some inspector or justice, that they are of the ordinary strength; a certificate of age is required from young persons between 13 and 18.

§ 17-19 Regulates appointment of inspectors of factories and superintendents.

§ 20. The inspectors are to make all rules necessary for the execution of the act, and to enforce the attendance at school, for at least 2 hours daily out of 6 days in the week, of children employed in factories; from whose weekly wages a deduction, not exceeding 1 penny for every shilling, for schooling, may be made.

§ 26. Interior walls of every mill to be lime-washed once a-year.

§ 27. A copy or abstract of this act to be hung up in a conspicuous part of every mill.

§ 45. The inspectors shall, once a-year, report their proceedings to one of the Secretaries of State.

FAILURE, a common term for bankruptcy.

FAIR (from the Latin *feria*, a holiday), a greater kind of market, held at a stated time and place, to which people resort from different and sometimes distant places, for the purpose of traffic. Anciently, commodities of every kind were chiefly sold at fairs; but in modern times the increase of towns, and the improvement in the means of communication, have tended greatly to diminish their importance; and in this country they are now mostly confined to the sale of agricultural produce.

Principal English Fairs.*

January.

20, 21. Melton Mowbray, horses and cattle.

February.

24. Daventry, horses, cattle.

March.

1. Bristol (10 days) miscellaneous.
2. Ashby de la Zouch, horses, cows, sheep.
7. Higham Ferrars, horses, cattle.
25. Woodbridge, Suffolk, horses.
29. Durham, cattle, sheep, horses.

April.

5. Gloucester, cheese.
8. Pontefract, sheep, cattle.

8, 9, 10. Barnet, horses and Scotch cattle.

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* The dates of the English fairs are filled up as they occurred in the year 1840; but in other years they will sometimes be different, as they are not unfrequently regulated by saints' days, or particular days of the week. When the date falls on a Sunday, they are generally held on the day following.

22. East Ilsley (every Wednesday till July) sheep.
23. Oakingham, horses, cattle.
24. Lincoln (4 days), sheep, &c.
27, 28. Boroughbridge, cattle, sheep.
29. Alton, sheep, lambs.

May.

1. Reading, horses, cattle.
4. Northampton, horses.
4, 5. Boston, sheep.
6. Abingdon, cattle.
— Southampton, cattle, cheese.
8. Stroud, cattle, sheep, pigs.
10, 11. Askrig, cattle.
11. Crediton, cattle.
12. Oswestry, cattle, sheep, pigs.
— Totness, horses, sheep, cattle.
13, 14. Ripon, horses, sheep.
20. Swindon, cattle, pigs, sheep.
22. Dunstable, horses.
23. Appleshaw, sheep-show before Weyhill Fair.
— Howden, horses.

June.

1. Leicester, horses, cows, sheep.
5. Malmesbury, cattle, horses.
9. Ashby de la Zouch, cattle, horses, sheep.
— Leighton Buzzard, horses.
12. Haverfordwest, cattle, horses, sheep.
13. Whittlesey, horses, cattle.
19. Northampton, horses.
20. Hornby, cattle, horses.
22. Horncastle do.
27. Wigan, horses, cattle.
28. Higham Ferrars, do.
29. Spalding, do.

July.

10. Barnard Castle, wool.
12. Thetford, wool.
21. Howden, horses.
26. Lewes, wool.

August.

3. Daventry, horses, cattle, sheep.
7. Barnard Castle, wool.
10. Doncaster, wool.
21. Horncastle, principal English fair for horses.
— Rugby, horses, cows, sheep.
26. Ipswich, lambs, cheese.
30. Spalding, horses.

September.

1. Bristol (10 days), miscellaneous.
4. Monmouth, wool.
4, 5. Barnet, sheep, Welsh cattle, horses.
11. Salisbury, sheep.
18. Woodbury Hill, kersey, druggets, &c.
— Bury (Lancashire), cattle, horses, woollens.
19. Atherstone, horses, cows, cheese.
21. Reading, cheese, &c.
25. Howden (six days), horses, &c.
— Ipswich, cheese, butter.

October.

2. Howden, horses.
— Woodstock, cheese.
— Dudley, horses, cattle, wool, cheese.
2, 3, 4. Northampton, horses, cattle, cheese, &c.
10. Leicester, cheese, cattle.
— Weyhill, sheep.
11. Holbeach, horses.
17. St Faith's, near Norwich, principal English fair for Scotch cattle.
18. Haverfordwest, cattle, horses, sheep.
19. Market-Harborough (9 days), horses, cattle.
20. Devizes, sheep, hogs, &c.
22. Burton-on-Trent, horses, cattle.
29. Horncastle, do.

November.

1. Saffron Walden, cows.
5. Beverley, cattle, horses, sheep.
6. Newcastle-under-Line, cattle.
— Eccleshall, cattle, sheep, saddle-horses.
7. Rochdale, horses, cattle, woollens.
8. Cirencester, cattle, sheep, horses.
8, 9. Leeds, cattle, horses, hardware.
8. Warwick, horses, cows, sheep.
13. Loughborough, do.
— Farnham, horses, cattle.
17, 18. Andover, sheep, horses, leather, cheese.
20. Boston, horses.
22. Hampton Green, Scotch cattle.
— Guildford, horses, cattle, sheep, hogs.
28. Gloucester, cattle, pigs, horses.
— Harleston (for a month), Scotch cattle.
30. Warrington (10 days) horses, cattle, cloth.
— Wells, oxen, horses, sheep, hogs.

December.

1. Bury St Edmunds, cattle.
— Rotherham, cattle, horses.
4. Dursley, cattle, &c.
— Atherston, horses, cows, sheep.
6. Bodmin, oxen, sheep, cloths.
— Higham Ferrars, horses, cattle, sheep.
7. Cheltenham, cattle, &c.
10, 11. Bewdley, hogs, cattle, horses, cheese, &c.
11. Baldock, cheese, &c.
— Boston, cattle.
9, 10, 11. Bradford (Yorkshire), hogs.
14. Thirsk, cattle, horses, sheep.
17. Hornsea, horses, cattle.
28. Bridgewater, cattle, &c.

Principal Scottish Fairs.

Falkirk (*Tryst*), 2d Monday in October for sheep, and following day for cattle and horses.
Edinburgh, Hallow Fair, 2d Monday in November, cattle and horses.
Doune, November, 1st Tuesday, sheep; 1st Wednesday, cattle and horses.
Rutherglen, 1st Friday after 4th May, great horse market.
Beauly, or Muir of Ord, Ross-shire, monthly, except January, February, March, and December.
Dumbarton, spring and summer months, for West Highland cattle and sheep.
Lockerby, Dumfriesshire, August, lambs; September, cattle and sheep.

Principal Irish Fair.

Ballinasloe, in Galway, October 5 (four days), cattle and sheep.

The foreign fairs are described under the heads of the countries wherein they are held.

"In the feudal ages, the right of holding fairs was a valuable privilege, conceded by the sovereign to the lord of the manor; and from the arts which the old barons used to draw crowds to their markets, perhaps Warren and Rowland might learn new ways of alluring purchasers to their marts of blacking and bear's grease. Much skill was shown in choosing the site; the author of a Statistical View of the Fairs of France remarks, that, on examining his work, it will appear that they were placed, for the most part, on the frontiers of the kingdom, or on the marches of ancient provinces; or at the foot of high mountains, at the beginning or end of the snow season, which for months shuts up the inhabitants in their valleys; or in the neighbourhood of famous cathedrals or churches frequented by flocks of pilgrims; or in the middle of rich pastures. The devotion of the people was also turned to good account; many fairs were held on Sundays in churchyards; and almost in every parish a market was instituted on the day on which the parishioners were called together to do honour to their patron saint. Lest all these artifices should fail to secure a great concourse, promises of sport and fun were held out, and each fair had its own peculiar drollery."—(*Deliciae Literariae*, p. 66.)

FALKLAND ISLANDS, or *Malvinas*, an insular group in the Southern Ocean, about 300 miles N.E. of Cape Horn, between lat. 51° and 52° 45′ S. and long. 57° 20′ and 61° 46′ W. It consists of two large islands, East and West Falkland, and about 90 islets. The two former contain nearly 13,000 square miles. These islands were discovered by Davis in 1592; and small settlements, at different times made on them by the English, French, and Spaniards, were successively abandoned. But as, since the increase of the southern whale fishery, and the opening of the South American trade, they have again attracted attention, formal possession was, in 1833, taken of them by the British government.

East Falkland, or Soledad, contains the small British settlement of Port Louis, which is situated on Berkeley Sound, at the north-east point. There is sufficient depth of water for vessels of any size in Berkeley Sound, with good shelter and anchorage. The principal production of the island is cattle.

West Falkland, the larger of the two islands, is at present uninhabited. The part chiefly frequented is Port Egmont on the northern coast.

These islands are surrounded with good harbours, and the waters abound with fish, particularly a species of mullet, which is salted for the use of the shipping. There are also numerous seals and sea-elephants. The skins of the former are very valuable, and the procuring of them forms the chief inducement for vessels to resort to the islands.

FANEGA, a Spanish corn measure equivalent to $1\frac{11}{20}$ Imp. bushel.

FANEGADA, a Spanish measure for corn land, equivalent to about 1 Imp. acre 10⅓ poles.

FATHOM, a measure of length in many countries, equal 6 feet. It is said to have been derived from the height of a well-proportioned man.

FAUX, a Swiss land-measure, equivalent to 7855 English sq. yards, or 65⅔ French ares; 6⅙ faux = 10 Imp. acres.

FEATHERS for ornamental dress are obtained from the ostrich and a variety of other birds, the chief of which are described under their proper heads.

Bed-feathers are procured in many parts of Britain from common poultry, and large quantities are annually brought from Limerick and other ports of Ireland. Considerable imports both of feathers and down likewise take place from the countries adjoining the Baltic and other parts. The most esteemed for beds are those of the goose, and they are best when plucked from the living animal, which is done thrice a-year, in the spring, at midsummer, and the beginning of harvest.

FEE-SIMPLE, a term sometimes applied to the value of a perpetual annuity; and more frequently to an English tenure of land, in which seizure is granted to a party and his heirs for ever.

FERNANDO PO, a mountainous island lying in the Bight of Biafra, 20 miles from the African coast. It is about 120 miles in circumference, and is fertile and beautiful. It was occupied by Great Britain as a naval and military station in 1827, from its supposed salubrity, and the facilities afforded by its situation for the suppression of the slave trade; but the climate having been found to be as pestiferous as that of the other settlements on the adjoining part of the African shore, the troops were withdrawn in 1834. The principal settlement was Clarence Town, on the N. side, in lat. 3° 53′ N., and long. 7° 40′ E.

FERRET, a cotton ware resembling tape, but much stouter, chiefly used in binding or making up articles of dress. It is also made of silk; and this last is sometimes called Italian ferret.

FIAT, in the English law of bankruptcy, is the act of court by which the petitioning creditor is authorized to prosecute his complaint against the bankrupt. By 1 & 2 Wm. IV. c. 56, § 12, it was substituted for the commission of bankruptcy, formerly in use. It is issued by the Lord Chancellor, the Master of the Rolls, the Vice Chancellor, or a Master in Chancery specially authorized by the Chancellor. [BANKRUPTCY.]

FIGS (Arab. *Teen.* Fr. *Figues.* Ger. *Feigen.* It. *Fichi.* Por. *Figos.* Sp. *Higos*), the fruit of a small tree (*Ficus Carica*), indigenous to the temperate parts of Asia, and now cultivated in the fertile islands of the Mediterranean, in Spain, Italy, Greece, and France. It is also grown with some success in the southern parts of England, but seldom in Scotland, except under glass. The fig consists of a pulp containing a number of seed-like pericarps enclosed in a rind; and is of a dark purple or brownish colour, with a sweet taste. When ripe they are generally dried in ovens to preserve them, and then packed very closely in the small chests and baskets in which we import them. The tree produces a double, and in some climates, as in Syria and Barbary, a triple crop; whence the great value attached to it in Eastern countries, where it bears fruit through a considerable portion of the year. The first ripe figs come to maturity about the end of June; the second crop or summer fig is that which is dried; the third often hangs and ripens upon the tree after the leaves are shed.

In the Levant, the time of gathering the summer fig, with its attendant process of drying and packing for the European market, is one of great bustle and activity. The chief seat of this trade is Smyrna. Dried figs also form a considerable article of commerce in Spain, Italy, and the south of France; besides affording, as in the East, an important article of food to the native population. Of late years, owing partly to a reduction of duty, the consumption of figs has increased in this country, amounting now to nearly 30,000 cwts. a-year; the greater part of which is imported from Turkey in little chests, or *drums*, of about 24 lbs. each. Figs are also brought from Malaga and Valencia in Spain, and Faro in Portugal. These last are mostly in packages called *frails*. The Faro frail = 32 lbs.; the Malaga frail = 56 lbs.

"The want of blossom on the fig-tree was considered as one of the most grievous calamities by the Jews. Cakes of figs were included in the presents of provisions by which the widow of Nabal appeased the wrath of David. In Greece, when Lycurgus decreed that the Spartan men should dine in a common hall, flour, wine, cheese, and figs were the general contributions of each individual to the general stock. The Athenians considered figs an article of such necessity that their exportation from Attica was prohibited. Either the temptation to evade this law must have been great, or it must have been disliked; for the name which distinguished those who informed against the violators of the law became a name of reproach, from which we obtain our word sycophant. At Rome the fig was carried next to the vine in the processions in honour of Bacchus, as the patron of plenty and joy; and Bacchus was supposed to have derived his corpulency and vigour, not from the vine, but from the fig. All these circumstances indicate that the fig contributed very largely to the support of man; and we may reasonably account for this from the facility with which it is cultivated in climates of moderate temperature."—"It is probable that if the fresh fig were much esteemed by the people of this country, the tree would be more extensively cultivated here in favourable situations, such as our southern coast. But it would seem from our old writers, and indeed from a common expression even of the present day, that, from some association of ideas, the fig was an object of contempt. '*Figo* for thy friendship,' says Pistol." (*Lib. of Ent. Knowledge;* art. *Veg. Sub.* v. i. pp. 242, 245.)

FILBERTS, the fruit of a variety of the hazel-nut (*Corylus avellana*), produced partly by the superiority of soil and climate where it grows, and partly by culture. The filbert is not thicker than the common nut, but is at least double the length, with a corresponding kernel. The largest of the species is the cob-nut, which is round. What is called the cluster-nut differs from the others only in the fruit being produced in large clusters at the ends of the branches. In this country, the management of the filbert is best understood in the county of Kent, especially about Maidstone, where immense quantities are grown for the London market.

FILE, *Files* (Du. *Vylen*. Fr. *Limes*. Ger. *Feilen*. It. *Lime*. Por. & Sp. *Limas*. Rus. *Pili*), a steel instrument with teeth upon the surface, for cutting and abrading metal, wood, and other substances. When the teeth, formed by a sharp-edged chisel, extend across the surface, they are properly termed files; but when by a sharp-pointed tool, in the form of a triangular pyramid, they are called rasps: the latter are chiefly used for wood and horn. Of files there are two varieties: 1*st*, *Single cut*, where the teeth are a series of sharp edges, appearing like parallel furrows; 2*d*, *Double cut*, when these are crossed by a second series of similar teeth: the first are fitted for brass and copper, the second for the harder metals, such as iron and steel. Files are also distinguished according to their degrees of fineness; the finest of all is the *dead smooth;* the next to this is the *smooth;* then the *second cut;* the *bastard cut;* the *rough;* and the *rubber*, a heavy square file used for the coarser kinds of smith-work. They are also distinguished by their shape, as flat, half-round, three-square, four-square, and round. The coarser kinds are made from the inferior marks of blistered steel. Those formed of the Russian iron called old sable (known by its mark CCND) are excellent. The finest Lancashire files, for watchmakers, are made of the best Swedish iron, called hoop L or Dannemora. Many contrivances have been set on foot to perform the operation of file-cutting by machinery, but none of them have fully succeeded, and all the best continue to be cut by the hand. The manufacture is one of the staples of Sheffield, and the finer kinds are extensively made at Warrington and Prescott, in Lancashire. Files, besides being used in immense quantities at home, are largely exported.

FIR. [Pine.]

FIRE-ARMS. [Gun.]

FIRE-WORKS (Fr. *Feux d'artifice*. Ger. *Feuerwerke*), well-known devices composed of explosive combustibles, generally of gunpowder along with iron, steel, copper, and zinc filings, resin, camphor, lycopodium, and lampblack. They are divided into three classes: 1*st*, Those to be set off upon the ground; 2*d*, Those which are shot up into the air; 3*d*, Those which act upon or under the water.

FIRKIN, an English measure of capacity now disused.

FIRLOT, an old Scottish corn-measure equivalent to one-fourth of the BOLL.

FIRM, the title under which the business of a mercantile company is carried on.

FISH, FISHERIES. The term fishery is applied to those places where fish are caught in such abundance as to constitute an important article in commerce. Great Britain possesses a coast-line of above 3000 miles in extent, while that of Ireland is above 1000 miles; and the greater part of the shores of both islands abound with those species of fish which exist in the largest number, and yield a supply of food the most acceptable. A very considerable portion of our coast population are more or less engaged in fisheries; and the shores are indented with bays and harbours which facilitate their employment, and render it an important branch of national industry. The principal kinds of fish which are the object of systematic occupation in the British seas are the herring, cod, ling, hake, lobster, mackerel, oyster, pilchard, and salmon; but the quantity of other fish taken is in the aggregate exceedingly great; and the capture of whales in the Polar Seas is an employment in which a considerable though declining amount of British shipping is engaged, principally belonging to the north-eastern ports. The whole of these are described under their proper heads. The annual produce of the fisheries of the United Kingdom is variously estimated at from £4,000,000 to £8,000,000.

The statutory rules as to the importation of fish of British and foreign taking are embodied in §§ 2, 44, and 58 of the act 3 & 4 Wm. IV. c. 52, an abridgment of which will be found under the head CUSTOMS REGULATIONS. By 1 & 2 Vict. c. 113, § 7, prohibitions against importing cured fish to be warehoused, were repealed.

FISH-HOOKS (Fr. *Hameçons*. Ger. *Fishangeln*), well-known instruments made of the best, smooth, sound, steel-wire; those for salt-water fishing being frequently tinned to prevent them wearing rapidly away in rust. In the United Kingdom they are manufactured chiefly at Redditch, in Worcestershire. Fish-hooks, besides being extensively used in this country, are largely exported.

FISH-MAWS, a term applied in Oriental commerce to a singular preparation of fish which is largely exported from the eastern islands to China. It is a favourite article of luxury with the inhabitants of that country, often bringing $75 per pecul in the market of Canton.

FITCH, the fur of the pole-cat, is principally brought from Germany; it is soft and warm, but its offensive odour tends to depress its value.

FLAG, the ensign borne on the mast of a ship to designate the country to which it belongs: in the royal navy it is likewise made to denote the rank of the officer by whom the ship is commanded. The ensign to be worn on all British merchant vessels is ordained by proclamation, dated 1st January 1801, to be a red flag, having in the upper and inner corner, next the staff, the crosses of St George, St Andrew, and St Patrick, blended on a blue ground.

None of her Majesty's subjects are permitted to hoist in their vessels the union jack, or any pendants or colours usually worn in her Majesty's ships, and prohibited to be worn by proclamation of 1st January 1801, under a penalty not exceeding £500; and any officer of her Majesty's navy, or customs, or excise, may enter on board, and seize and take away such colours, which shall thereupon become forfeited. (4 Wm. IV. c. 13, § 11.)

FLANNEL (Fr. *Flannelle*. Ger. *Flanell*), a well-known, slight, loose, woollen stuff. In this country the finest kinds are made in Wales, principally in Montgomeryshire, and within a circle of about 20 miles round Welchpool. Flannels are also manufactured at Bury, in Lancashire; in Shropshire; and to a small extent in Wicklow, in Ireland. [WOOLLEN MANUFACTURE.]

FLAX (Du. *Vlasch*. Fr. *Lin*. Ger. *Flachs*. It. *Lino*. Por. *Linho*. Rus. *Len*, *Lon*. Sp. *Lino*), an annual plant (*Linum usitatissimum*), cultivated in this and other countries from time immemorial for its textile fibres, which are spun into thread, and woven into linen cloth. The stem is upright and slender, having leaves placed alternately on it of a grayish colour. When about 2½ or 3 feet in height, it divides itself into slender stalks, which are terminated by small blue indented flowers; and these produce large globular seed-vessels, divided within into ten cells, containing the bright slippery elongated seeds, well known in trade under the name of LINSEED. The plant will grow on almost any land; but though easy of culture, its quality depends very much on fitness of soil and situation. Rich alluvial land (as in Zealand, which produces the best Dutch flax) is deemed the most favourable situation for it. It impoverishes the soil, whence it is often sown on rank ground, and seldom two years successively on the same spot. The plant blossoms in June or July, and ripens its seeds in August or September. Two varieties are generally distinguished, *spring flax*, with short knotty stems, and *close flax*, with longer and smoother stems: the former is called by the Germans, who bestow much attention upon the culture of flax, *Klanglein* or *Springlein*, and the latter *Dreschlein*, the kind most commonly grown. The spring sort is sown in April or May, the late in June. When the flax is ripe, which is indicated by the bottom of the stalk becoming yellow, and the leaves beginning to drop off, it must be immediately pulled. The seed, however, is still immature, fit only for the oil-press, but not for sowing; and hence if seed be the object, the plant must be suffered to acquire its full maturity, in which case the fibres are less soft and fine. The produce varies according to soil, season, and management, from 280 to 980 lbs. per acre, but the average crop may be estimated at 560 to 700 lbs. of clear fibres, available for spinning and weaving. The average quantity of seed produced from an acre is from 6 to 8 bushels.

Good flax should have a yellowish, or bright silver-gray colour, inclining neither to green nor black; it should also be long, soft, fine, and glistening, somewhat like silk, and without broad tape-like portions from undissevered filaments. Tow differs from flax in having shorter fibres, of very unequal length, and more or less entangled.

In this country, flax is at present partially cultivated in Lincolnshire, Somersetshire, and Yorkshire; in some parts of Scotland; and in Ireland, which indeed produces a very large portion of what is required for its extensive linen manufactures. But the United Kingdom, generally, has always been in a great measure supplied by foreign countries. In 1820, the quantity of foreign flax entered for home use was 376,170 cwts.; which, in consequence of the late expansion of the linen manufacture, was increased in 1830 to 955,122 cwts.; and in 1840 to 1,261,292 cwts. Upwards of two-thirds of the whole imports are from Russia; the remainder, with the exception of a small quantity brought from France, is supplied by Prussia, Holland, and Belgium.

The Russian flax is classed according to its quality, and made up into bundles by *braackers*, or sworn inspectors appointed by government. That imported into this country is chiefly shipped from Petersburg and Riga.

At Petersburg, the different kinds are distinguished by the names of the districts in which they are produced,—as Novgorod, Pleskau, Carelia, and Vesnikovsky flax. The quality and colour of the two first are very variable, from white to dark gray, also blueish, yellowish, and whiteish; such as is not steeped in water, and called Slanetz, is of a much finer and softer harle than the common run. The Carelia is generally whiter, and of a longer and stronger harle than any other. The Vesnikovsky is of a fine silky harle, very strong, and of a grayish or silver tinge. At the public braack, each kind is separated into three classes or sorts, distinguished by the form in which it is made up for shipment: First, that which is put up into bobbins of 12 heads, each bobbin weighing about 3½ poods, or 126 lbs. avoirdupois: Second, Bobbins of 9 heads, each bobbin weighing about 2 poods, or 72 lbs. avoird.: Third, Bobbins of 6 heads, each bobbin weighing about 1½ pood, or 54 lbs. avoird. The difference of price between the sorts is generally from 3 to 4 rubles, per berkovetz of 10 poods, or 360 lbs. avoirdupois.

"Unless the supply in view be very large, and prices disproportionately high, it is perhaps advisable, in the Petersburg market, to make purchases before August, for in and after that month prices are very frequently found to take sudden starts, from the competition of numerous buyers, who sometimes happen to have to provide for ships waiting for cargoes; besides this, the consideration of the exchange usually advancing towards autumn has not to be lost sight of." (*Clark's Russia Trader's Assistant.*)

At Riga, the public braack distinguishes the various kinds of Marienburg, Thiesenhausen, Druyaner, and Livonian flax, as follows:—*1st*, Sorts, crown Marienburg, marked C M; and picked Thiesenhausen Rakitzer, marked P T R. *2d*, Sorts, Marienburg cut, marked M C; Druyaner cut, marked D C; and Hoffs three-band, marked H T. *3d*, Sorts, Risten three-bands, marked R T; and Livonian three-bands, marked L T. Lastly, Codilla, marked F C.

Of the other kinds of flax imported into this country, the growths of Liebau, Memel, and Oberland are held in little esteem. Those of Holland and Belgium, however, are well dressed, and of the best quality.

The chief ports in this country for the importation of foreign flax, are Dundee, Hull, and London. The following, extracted from the Dundee price-current of May 1841, shows the comparative estimation in which the different kinds are held in our principal market:—

	L.	s.		L.	s.		L.	s.		L.	s.		L.	s.		L.	s.
Arch. Otbor......	53	0	@	54	0	Riga PTR......	43	0	@	43	10	Crown Oberland	39	0	@	—	—
Do. Crown....	50	0	..	51	0	Do. DC.......	39	0	..	39	10	Arch. 1 Codilla..	32	10	..	—	—
Do. 4th sort....	39	10	..	40	0	Do. RT........	34	0	..	35	0	Do. 2 do.				None.	
Peters. 12 head..	44	0	..	44	10	Do. Hoffs.....	41	0	..	42	0	Do. 3 do.....	—	—	..	26	—
Do. 9 do...	38	0	..	39	0	Memel 4 brand..	38	0	..	39	—	Do. 1 Tow....	35	10	..	—	—
Do. 6 do...	34	0	..	36	0	Neust. No. 1.....	32	0	..	—	0	Do. 2 do.....	31	0	..	31	10
Narva 12 do...	41	0	..	44	0	Do. No. 2.....	29	0	..	30	0	St. Pet. Codilla..	20	0	..	20	10
Do. 9 do...	36	0	..	—	0	Konigsberg do...	30	0	..	32	—	Riga do.....	23	0	..	—	—
Do. 6 do...	31	10	..	—	—	Crown Podolia..	40	0	..	—	0	Narva do.....	20	10	..	21	0
Liebau 4 brand..	40	0	..	—	0	Crown Druana..	40	0	..	—	0	Pernau do.....	20	10	..	26	10

The duty charged up to 1825, upon foreign flax, was, when dressed, £10, 14s. 6d., and when undressed, 5d. per cwt. In that year, the duty on both kinds was fixed at 4d. per cwt.; a rate which was further reduced in 1826 to 3d., in 1827 to 2d., and in 1828 to the nominal rate of 1d. per cwt.

Tares, &c. at Dundee.

Petersburg flax, generally in bobbins, but when matted, tare 2 lbs. per mat.

Riga, Pernau, and Narva flax, always in mats; tare 12 lbs. per mat.

Archangel flax, always in mats; tare 14 lbs. per mat.

Leibau, Memel, and Neustadt flax, always in bobbins, and therefore no tare.

Tow and codilla of all kinds, tare 14 lbs. per mat, when matted, and no tare when loose.

Draft not allowed in Dundee.

Credit, 6 months, unless otherwise agreed.

At Hull, the commercial allowances are generally the same as in London.

Tares, &c. at London.

Petersburg flax; draft of 2 lbs. on every scale—about 5 cwts. each when in mats. Can either have them stripped or take the real weight of mats. Tare 2½ lbs. per bobbin.

Narva flax, same as St Petersburg.

Riga flax, always in mats; draft on each mat 1 lb.: Tare, 20 lbs. per mat or mats 3 cwts. or upwards; 14 lbs. when under 3 cwts.; 10 lbs. on small.

Archangel and Pernau flax; draft and tare same as Riga.

Credit, 9 months. Thus, if by agreement, 6 months' bill is granted, then a discount of 3 months is taken off; again, if a 4 months' bill is granted, a discount of 5 months is taken off.

New Zealand Flax is the product of a different plant (*Phormium tenax*), the leaves of which yield a very strong and beautiful fibre: it has been of late imported in considerable quantities from that island for the manufacture of cordage. From having the defect, however, of breaking easily when made into a knot, it has proved much less useful than it was expected to be. Its cultivation has been attempted on the continent of Australia, but as yet with little success; also near Cherbourg, Toulon, and other places in France; and it has been introduced into Ireland, the moist climate of which is considered to be favourable to its growth.

FLAX-SEED. [Linseed.]

FLINT (Fr. *Pierre à fusil.* Ger. *Feuerstein*), a mineral composed almost entirely of silica. Few parts of the world are without it. It is used, when calcined and ground, in pottery; also for gun-flints, for which purpose the yellowish gray flints are preferred.

FLORENTINE, a silk stuff, chiefly used for men's waistcoats; it is made striped, figured, and plain,—the last being a twilled fabric. Two other stuffs are known under this name; one composed of worsted, used for common waistcoats, women's shoes, and other articles; the other, made of cotton, resembling jean, and generally striped, is used for making trousers.

FLORIN (Ger. *Gulden*), a name given to different silver coins, current in various parts of the Continent, especially Germany and Holland. The imperial or convention florin, the integer of account, and principal coin in the Austrian empire, is worth about 2s. 0½d. sterling; the Dutch florin or guilder is equal 1s. 8d. sterling; which is also very nearly (1s. 7$\frac{8}{10}$d.) the value of the Rhenish florin (in 24½ *guldenfuss*), lately adopted as the integer of account by the States of Southern and Western Germany; the Polish florin is equal 6d. nearly. The florin is also a German gold coin, worth about 6s. 11d., which is chiefly current in the countries bordering the Rhine.

FLOSS-SILK (Fr. *Filoselle, Bourre de soie*), the name given to the portions of ravelled silk broken off in the filature of the cocoons. It is carded like cotton or wool, and spun into a coarse soft yarn or thread for making shawls, socks, bands, and other articles, where an inferior kind of silk may be used.

FLOTSAM, JETSAM, and LIGAN, are barbarous appellations used to distinguish goods in circumstances at sea distinct from legal wreck, in order to constitute which they must be thrown on shore. Flotsam is such portion of a ship and cargo as continues floating; jetsam is when goods cast into the sea there sink and remain; ligan is where, though sunk, they are tied to a buoy, in order that they may be found again. All three belong to the crown, or its grantee, if no owner appear to claim within a year after they are taken possession of by the persons otherwise entitled to them.

FLOUNDER, one of the most common of the flat fish (*Platessa flesus*), is found all round our coast, particularly near the mouths of large rivers, which it generally ascends. It spawns in February or March.

The common dab, a species of flounder (*Platessa limanda*) frequently caught along with that fish and plaice, is considered superior to both. It spawns in May or June, and is in best condition for the table in February, March, and April.

FLOUR (Du. *Bloem.* Fr. *Fleur de farine.* Ger. *Feines mehl, Semmelmehl.* It. *Fiore.* Por. *Flor da farinha.* Sp. *Flor*), the finely ground meal of wheat. Three qualities are distinguished, called firsts, seconds, and thirds. [Corn.]

The barrel of flour is 196 lbs. net.

FLOWERS (Artificial), imitations of flowers and leaves, which form a common article in the dress of ladies. They are extensively made in this country, but the best are imported from France, where great improvements have been made of late years in the manufacture. The French adopt the finest cambric for making petals, and the taffeta of Florence for the leaves; while, by some artists, whalebone, in very thin leaves, is, after being bleached and dyed, employed for flowers. The imitations of nature made of these last are of remarkable beauty.

FLUOR SPAR, or native fluoride of calcium, sometimes called *Derbyshire spar*, is a mineral found in great beauty and abundance in that county and other places. It is procured in cubic crystals of various colours, and in the Odin mine in detached masses, from an inch to more than a foot in thickness. This variety admits of being turned in the lathe into vases and other ornaments. Fluor spar is also sometimes used as a flux for promoting the fusion of other minerals.

FOOT, a measure of length, varying in different countries from about 11 to 13 inches.

FORESTALLING, which seems to have originally signified an interrupting on the highway, came to embrace all attempts to prevent victuals or merchandise from reaching a public market, or to enhance their price when they reached it. *Regrating*, an offence associated with it in the same statute (5 & 6 Edw. VI. c. 14), is defined, "the buying of corn, or other dead victual, in any market, and selling it again in the same market, or within four miles of the place" (*Blackstone*, iv. 158); and *Engrossing*, another offence of a similar description, is said to consist in "the getting into one's possession, or buying up, large quantities of corn or other dead victual, with intent to sell them again" (*Ib.*). The statute of Edward imposed severe penalties on these offences, according to the number of convictions; but all the enactments on the subject were repealed by 12 Geo. III. c. 71. It is still held, however, by the institutional writers, that they are offences at common law, punishable with fine and imprisonment, though how far the criminal law would now be extended to such cases, where there is no fraud, is very questionable. The last case litigated was that of Waddington in 1800 (*East.* i. 164). The inutility and impolicy of these antiquated interferences with the freedom of industry are now too obvious to require comment.

FORGERY may be defined as the construction of a document in such a manner as to make it pass for the writing of a person different from the one who actually prepares it, and thereby to occasion a fraud. It may be committed not only as to a whole document, but as to part of one, *e. g.* by an alteration in the amount of a bill, whereby the person who has engaged for a certain sum is made to appear bound for a larger. It is in its effect on the rights of the parties to negotiable documents only that it is connected with the subject of this work. No man can be made liable by his signature being forged by another, though one may in such circumstances create a liability by acknowledging the signature as his own. In the general case, acceptance of a bill is an acknowledgment of the drawer's signature, which will make the acceptor fully liable to third parties. Acceptance is not, however, held to be an acknowledgment of an indorser's signature (Smith *v.* Chester, 1 *T. R.* 654). Whoever pays a forged bill (whether a drawee, or a banker at whose house it is made payable) is presumed also to have admitted or guaranteed the signatures of the parties, and will not recover his money, unless he find out the forgery immediately, before circumstances affecting the position of other parties have intervened, and send notice on the day on which he made payment. A person so paying will not have recourse on the party who appears, through means of forgery, as drawer of an unaccepted or acceptor of an accepted bill. A party who pays for honour is under like liabilities should the name of the person he has so paid for have been forged. "Whoever," says Mr Justice Bayley, "pays a bill, should be satisfied that it is, in all its parts, genuine; if he be not, he will pay it at his peril, and will lose his remedy against the party on whose account he pays it" (322). In the case of vitiations and alterations, this distinction has to be considered; that where, through the carelessness of the original maker of the document, facilities have been left for alteration without detection (as where room is left for adding a word to the sum and thereby increasing it), he will be responsible for what appears on the face of the paper. (*Bayley*, 318-324. *Chitty*, 286, 287, 628.)

FOULARD, a kind of gauze riband made in France.

FRANC, the unit of the monetary systems of France and Belgium, is a silver coin, worth about 9½d. sterling; the Italian livre, forming the integer of account in Genoa and other places, is of precisely the same value. The Swiss franc, introduced during the existence of the Helvetic Confederation, is equal to about 1½ French franc, or 1s. 2d. sterling.

The mutual conversion of French and British money is, for general purposes, readily accomplished by reckoning 25 francs = £1, or 100 francs = £4; an equation which furnishes us with the following rules:—

1. *To convert Francs into Pounds.*

Rule.—Cut off the last two figures, and multiply the remainder by 4.

Ex. In 2500 francs how many pounds?

25,00
4
——
Ans. £100.

2. *To convert Pounds into Francs.*

Rule.—Divide by 4, and add two ciphers to the quotient.

Ex. In £100 how many francs?

4 | 100
——
Ans. 2500 francs.

FRANCE, a powerful kingdom advantageously situated in the W. part of Europe, between latitude 42° 20′ and 51° 5′ N., and longitude 4° 50′ W. and 8° 20′ E. It is bounded N.W. and N. by the English Channel and the N. Sea; N.E. by Belgium, Luxemburg, and the Rhenish provinces of Prussia and Bavaria; E. by Baden, Switzerland, and the Sardinian States; S. by the Mediterranean and Spain; and W. by the Bay of Biscay and the Atlantic. Including Corsica, it is divided into 86 departments, designed from their geographical position; 363 arrondissements, named from their chief towns; 2834 cantons; and 37,187 communes or parishes. Area, nearly 53,000,000 hectares, or about 204,000 British square miles. Population in 1836, 33,540,908, or 164 to the square mile. Capital, Paris, an inland town situated on the river Seine, and in the department of the same name, in lat. 48° 50′ N., and long. 2° 20′ E., about 210 miles in a direct line S.E. of London; population in 1836, 909,126. Government, a constitutional monarchy, hereditary in the male line, with two chambers,—a house of peers, the members of which are nominated by the king, and a chamber of deputies, of whom there are 459, chosen by as many electoral colleges, for 5 years. A deputy must be 30 years of age, and pay direct taxes to the amount of fr. 500, or about £20; an elector must be 25 years of age, and pay direct taxes to the annual amount of fr. 200, or £8: the total number of these last in 1838-1839 was 197,598.

Physical Character.—France generally exhibits a level, but not undiversified surface. The most level tracts are in the north. The elevated portions are chiefly in the eastern and southern provinces. Of the two principal chains, one is connected with the Alps, the other, a branch from the Pyrenees, consists of the Cevennes, a long range of mountains, which, traversing Languedoc, divides the basin of the Garonne from the Mediterranean, and afterwards stretches northward in a direction parallel with the Rhone and the Saône. In Auvergne a branch of this chain spreads into a lofty region, which exhibits very striking indications of volcanic phenomena. In respect to climate, the country has been divided into three regions: the Northern, the Central, and the Southern. In the first, limited by a diagonal line from lat. 47° on the W. to 49° on the E., the waters have all a northerly course, and the temperature and produce bear a great resemblance to those of the S. of England. The Central region, bounded southward by a diagonal line, from lat. 45° on the W. to 47° on the E., comprises the country south of the Loire, and may be generally described as the basin of that river: this is esteemed the pleasantest part of France, the weather being generally clear and agreeable, while the vine flourishes, together with wheat and barley, oats and maize. In the southern region the climate approaches to that of Italy; wheat gives place to maize; the vine forms a primary object of industry, especially in the valley of the Garonne; and the olive, the mulberry, and the orange flourish.

Rural Produce.—The country generally is highly fertile. Extensive tracts of heath occur in Guienne, Gascony, Anjou, Brittany, and Normandy, and poor districts in various other parts, but the waste surface bears only a small proportion to the arable and pasture lands. Agriculture, however, is commonly in a very backward condition. There are few large proprietors, or speculative farmers, who have capital; the average size of farms is much less than in England, and there are a vast multitude of small occupations, by which a family is barely enabled to exist. The implements in use are besides few, and of an antiquated kind. The land is in consequence usually worked, cleaned, and manured in an imperfect manner; and the produce of an acre of wheat on good soil is averaged at only 15 to 20 bushels; of barley, 20 to 25; and of oats, 25 to 30, or from about one-third to one-half less than on similar lands in England and Scotland, where the climate is inferior. In the northern districts adjoining to Belgium, a better system prevails; the land in the neighbourhood of Paris is also well cultivated. In most other parts, except where maize is raised, the old plan of two or three crops and a fallow is adopted; these last being usually ill worked and dirty. The extent of the arable land is at present estimated at nearly 57,000,000 acres (23,000,000 hectares); and, according to a recent statement, the produce in 1835 was as follows:—Wheat, 72,000,000 hectolitres; oats, 49,000,000 hectolitres; rye, 33,000,000 hectolitres; barley, 18,000,000 hectolitres; maslin, or mixed corn, 12,000,000 hectolitres; buck-wheat, 5,000,000 hectolitres; maize and millet, 7,000,000 hectolitres; pease and beans, 3,500,000 hectolitres; other small grains, 4,000,000 hectolitres; total grain, 203,500,000 hectolitres. Potatoes, 72,000,000 hectolitres; chesnuts, 2,000,000 hectolitres.

The woodlands occupy about one-seventh of the whole surface, but their produce is hardly sufficient for the consumption of a country where timber, besides being the chief combustible, is in constant request for other purposes. The varieties of climate and position are favourable to the growth of all kinds of European and many exotic trees, including the cork-tree, which is cultivated in the departments of the south-west. The forests are principally on the highlands in the eastern part of Central France; the ancient province of Bretagne being, on the other hand, the most destitute of wood; but upon the whole it is pretty generally distributed. About one-seventh of the woodlands, consisting of 1473 different forests, belong to the state.

The vine, next to wheat, is the most important object of cultivation throughout the whole kingdom, except in the departments of the north and north-west; and the amount of land thus occupied is estimated at 2,134,822 hectares, or about 5,275,450 acres. The growers of wine are estimated at nearly 2,000,000; the quantity annually produced at 40,000,000 hectolitres (880,000,000 gallons), worth about £22,000,000; while the duties imposed on its consumption amount to nearly £3,000,000. The departments in which the vineyards are chiefly situated are the Gironde, which yields about 2,500,000 hectolitres yearly, and furnishes the wine known in England under the name of claret; Charente-Inférieure, about 2,500,000 hectolitres; Herault, upwards of 2,000,000 hectolitres; Charente, 1,700,000 hectolitres; also Dordogne, Gers, Gard, Lot-et-Garonne, and Var; but those of Marne, Aube, and others, forming the ancient province of Champagne, as well as those of Côte d'Or, and Saône et Loire, comprised in Burgundy, though yielding a smaller quantity than many others, are distinguished for the superior quality of their wines. About one-sixth of the wine is converted into brandy; that used for exportation is chiefly made in the Bordelais, but the best is that of Charente, which furnishes the Cognac. [Wine. Brandy.]

Beet is extensively grown for the sugar derived from its root; its culture is chiefly pursued in the departments of the N. and E., and part of the centre; the two arrondissements of Lille and Valenciennes, in the dep. du Nord, however, furnish one-third of the whole quantity made. This branch of industry has much increased of late years. Of the fruits, the mulberry, reared for the nourishment of the silk-worm, is one of the most important; it is chiefly grown in the S., particularly in the departments of Gard, Drôme, Vaucluse, and Ardéche; in 1835, the quantity of silk cocoons obtained amounted to 9,007,967 kilogrammes. Apples and pears are plentiful in the departments of the N. and N.W., where the culture of the vine ceases, and cider and perry are the ordinary beverages of the inhabitants. Chesnuts are so abundant in some of the central and southern departments that they supply a large portion of the food of the population of the rural districts. The olive, orange, lemon, and pistachio are produced on the shores of the Mediterranean, but are not equal to those of other countries; the best olive oil is that of the dep. Bouches-du-Rhone and of the neighbourhood of Aix.

The domesticated animals are, for the most part, similar to those of Great Britain. According to Berghaus, the live stock in 1840 amounted to 1,872,600 horses, 6,793,400 cattle, 39,000,000 sheep, 3,350,000 mules and asses, 4,500,000 hogs, and 900,000 goats. The horses are generally of inferior breed; but great pains is at present bestowed on their improvement. The rearing of cattle is pretty general, especially in the mountainous regions, where the ox is preferred to the horse for farm-labour. The oxen of Gascony are the largest, and the navy is entirely provisioned from them; but Paris is mostly supplied from Anjou. The cheese of Dauphiny, Franche Compté, and the Ferez mountains is much esteemed. The best butter is made in the N., particularly in Brittany, Normandy, and the vicinity of Boulogne, from whence considerable quantities are exported. The sheep-wool, of which the annual produce is about 45,000,000 kilogrammes, is usually of a coarse description; only a small portion of the native breeds having been crossed with the Merino and other fine kinds. The goats are mostly in the Alpine and Pyrenean cliffs; in the latter of which the Thibet goat has been naturalized. The hogs are most abundant in the E. and N.E. departments, where they supply the means of a considerable provision trade.

The Mines are chiefly under the control of government, by whom the kingdom is divided into six departments, which are placed under an equal number of inspectors, who, with the Minister of the Public Works, compose the Council-General of Mines. In Paris there is a theoretical school, and at St Etienne one for practical men. Coal is worked in thirty-three departments, but the annual produce is only about 20,000,000 metrical quintals; the most productive districts are near Valenciennes in the N., and St Etienne in the S., but it is also dug in the departments of Saône et Loire, Aveyron, and Gard. Iron is produced annually to the extent of 18,000,000 metrical quintals. The quantity smelted has been much increased of late years, but the quality being inferior, it maintains its ground against that produced in other countries only by means of protecting duties. The principal iron-works are in the vicinity of Nevers, and the district of Forez, about St Etienne. Rock-salt and brine-springs exist in the department of Meurthe. The only other mineral products that need be noticed are,—silver, found in the department of Isère; copper, chiefly in the neighbourhood of Lyons; lead in the departments of Finistère, Isère, Lozère, and Vosges; besides which, manganese, antimony, clay for porcelain, bricks, and tiles, gypsum, chalk, and slate, are obtained in various places.

In Manufactures, France ranks next to Great Britain, and in the year 1839, the estimated value of the goods produced was, fr. 2,330,000,000 (£93,200,000). But in several branches, as afterwards noticed, the industry of the country has been misdirected by a vicious anti-commercial system of legislation. The principal manufactures are those of silk, woollen cloth, linen, cotton, iron and hardware, leather, and sugar.

The French silks are distinguished by superior taste and elegance, qualities for which they are unrivalled in any other part of Europe, or indeed of the world. The number of looms in 1839 was estimated at 85,000, employing 170,000 hands; and their annual produce at fr. 300,000,000 (£12,000,000). This truly national manufacture is principally carried on in the vicinity of the districts where the raw silk is produced. Its chief seat is Lyons; but it likewise exists on a considerable scale at Nimes, Avignon, Annonay, Tours, and Paris, at which last it has recently received a great augmentation. Ribands are made at St Etienne, and St Chamond near Lyons.

The woollen manufacture, besides being of great importance, is also one of those that appears well adapted to the country; and of late years it has increased materially. The estimated value of the goods manufactured in 1839 was fr. 265,000,000 (£10,600,000). Its principal localities are as follow:—Broadcloths are made at Elbœuf, Louviers, and Vire, in Normandy; at Abbeville; at Sedan; and in the S. at Carcassonne, Lodéve, and Castres: light fabrics, at Paris, Rheims, Amiens, and Beauvais: hosiery, at Paris, Troyes, Orléans, and at different places in Picardy; and in the S. at Nimes, Lyons, and Marseilles: carpets, at Paris, Abbeville, Aubusson, and Felletin: shawls, including cashmeres, are made at Paris, Lyons, Nimes, and St Quentin.

Linens of the finer kind are produced at St Quentin, Cambray, Valenciennes, Douay, and other places in French Flanders; coarser linens and sailcloth, in Bretagne. The manufacture besides exists in Dauphiny. Lace is made at Alençon, Caen, and Bayeux, in Normandy; also at Valenciennes, Douay, and other places. The annual value of these different manufactures is estimated at fr. 260,000,000 (£10,400,000).

The cotton manufacture is carried on principally in the N. and E. departments. Its chief seat is Rouen, the Manchester of France; to which town it bears the further resemblance of being situated within nearly the same distance of Havre that Manchester is from Liverpool. This manufacture also exists on a very considerable scale at Paris, Troyes, and St Quentin. Printed calicoes are made at Rouen and Beauvais; and at Colmar and Mühlhausen, in the department of Haut-Rhin. This manufacture, under the influence of high protecting duties, has increased faster than any other since 1815, and it now nearly supplies the home demand. But beyond this limit it will not probably be much advanced; as, although the French excel in the brightness and durability of their dyes, their machinery is more expensive and less improved than that of Great Britain, while their coal costs about double what that mineral can be procured for in Manchester and Glasgow. The estimated value of the cotton goods manufactured in 1839 was fr. 225,000,000, or £9,000,000.

Wrought-iron goods are made at Grossure, Vienne, St Bonnet-le-Desert, and Vierzon; steel articles, near St Étienne, Arc near Gray, Raveau, and La Doué near La Charité, Orléans, Foix, and Beze; brass and zinc wares at Rouen and Paris; tinned-plate wares at Imphy, Pont St Ours, and Montataire; wire and nails at Laigle, Lods, Morvillars, and Romilly; tools at Amboise, Toulouse, Arc, Foy, and Klingenthal; firearms and other weapons, at Tulle, Paris, St Etienne, and Klingenthal; hardware, at Paris, Strasbourg, Châlons-sur-Marne, Thiers, Châtellerault, and Langres: the total annual produce of these different manufactures is estimated at fr. 215,000,000 (£8,600,000). Bronze goods, chiefly at Paris. Those of copper, at Romilly, Imphy, Rouen, Toulouse, and Paris; and of lead, at Paris and Tours. Goods of tin, platina, mercury, and antimony, chiefly at Paris, at which city are likewise the principal sugar-refineries, and manufactories of soap, hats, furniture, starch, lacquered goods, gold and silver lace, goldsmiths' wares and jewellery, chemical articles, musical instruments, and watches: watch-machinery, however, is chiefly made at Beaucort, St Nicholas d'Aliermont, Besançon, and Montbéliard. Paper and paper-hangings are manufactured at Annonay, Sorel, Saussaye, Paris, Vienne, and other places; leather, including gloves, at Paris, Sens, Lonjumeau, Grenoble, and Toulouse; porcelain, at Paris, Sèvres, and Limoges; and wedgewood and other earthenware, at Sarreguemines, Creil, and Montereau. Glassware, at St Gobin, St Quirin, Monthermé, and Cirey. Perfumery, in the southern departments. Sugar from beet-root is chiefly made in the north; a branch of industry, which, first introduced during Napoleon's anti-commercial system, has greatly increased of late years. The produce of 1838 was estimated at 50,000,000 kilogrammes; but its existence is entirely dependent on the continuance of the present high duties on foreign and colonial sugar. Steam-engines are now generally in use, and about two-thirds of them are of French manufacture.

Paris is the principal seat of the book-trade; but Lyons and Avignon are also important literary marts. This trade has increased greatly since 1815, though it suffers much from piratical practices in Belgium and Switzerland, where most French works of merit are almost immediately reprinted. All the French booksellers are licensed, and obliged to conform to certain prescribed rules.

The Fisheries on the coast are not of much importance; the principal are those of pilchards, off Brittany; of herrings, at Dieppe; of turbot, mackerel, &c. between Dunkirk and St Valery; of oysters, at Cancale Bay and the mouths of the Seine; and of anchovies, on the Mediterranean coast, especially off the department Du Var. In 1838, the number of boats engaged in the coast fisheries on the Atlantic was 4626; tonnage, 38,008; crews, 21,994: On the Mediterranean, boats, 1260; tonnage, 5931; crews, 5213; total boats, 5886; tonnage, 43,939; crews, 27,207. The cod-fishery on the Bank of Newfoundland, and at the French islands of Miquelon and Pierre, is chiefly prosecuted by vessels fitted out from Dunkirk, Marseilles, Granville, Bordeaux, and La Rochelle; the number employed in 1838 being 477; tonnage, 57,954; crews, 11,361; and the produce consisted of 432,812 cwts. wet fish; 276,858 cwts. dry; 34,234 cwts. oil; and 17,560 cwts. sounds. In the same year, the whale-fishery employed 21 ships (chiefly from Havre), their aggregate tonnage being 8610, and crews 690. The cod and whale fisheries are mainly supported by a system of bounties.

Internal Trade and Means of Communication.—The difference between the climate and productions of the northern and southern divisions of the kingdom affords ample scope for exchange, and the internal trade is in consequence somewhat considerable, having greatly increased since it was emancipated from the miserable system of provincial duties under which it laboured prior to the revolution. The means of communication, however, will not bear comparison either with those of Great Britain or the United States. The roads are divided into royal, departmental, and communal, the expenses of which are respectively defrayed by the government and the departments or communes to which they belong. The first, in 1837, extended about 22,000 miles; they are commonly well made,—their construction and repair, as well as those of the departmental roads, which extend 23,000 miles, being under the superintendence of a central board; but the communal roads, which are under no such control, are mostly in a very bad state. Few railroads have yet been laid down; the principal being those between Paris and St Germain, and from St Etienne to Lyons. But surveys have been made, and reported to the Chambers, of five different lines, with branches, which it is considered desirable should be undertaken. These lines are, 1*st*, From Paris to Rouen, Havre, and Dieppe, with branches to Pontoise and Beauvais. 2*d*, From Paris to Lille, with branches to Valenciennes, Calais, Boulogne, and Dunkirk. 3*d*, From Paris to Strasbourg, with branches to Metz, Vitry-le-Français on the Marne, and Gray on the Saône. 4*th*, From Paris to Lyons and Marseilles, with branches to Melun and Gray. 5*th*, From Paris to Orléans, Tours, and Bordeaux, with branches to Poitiers, Nantes, Louviers, and Elbœuf. The extent of these projected lines is about 3125 English miles, and the estimated cost of their construction, fr. 908,000,000, or £36,320,000.

The extent of water-communications was estimated in 1837 at 7866 miles, of which about five-sevenths were contributed by means of navigable rivers, and two-sevenths by canals. Of the former, the principal are the Seine, the navigation of which commences at Troyes; the Vilaine, commencing at Rennes; the Loire, commencing at Roanne; the Dordogne, near Souillac; the Garonne, a little above Toulouse; and the Rhone, which, though liable to interruption after it leaves the Lake of Geneva, recommences a little above Seyssel, on the frontier toward Savoy, and remains open during the rest of its course. The principal existing canals are as follow:—The Great Canal of Languedoc, or *du Midi*, which joins the Garonne, at or near Toulouse, with the port of Cette, and thus connects the Atlantic with the Mediterranean. It was opened in the reign of Louis XIV. A. D. 1681, and is one of the most magnificent canals in the world. The canal of Charollais, or *du Centre*, which connects the Loire, near the junction of the Arroux, with the Saône, at Chalons-sur-Saône. The canal of the Rhine and Rhone or *du Monsieur*, which connects these rivers by joining their tributaries, the Doubs and the Ill. The canal of Burgundy, which joins the Saône with the Yonne, and thus connects the Seine with the Rhone and Rhine. The canals of Briare and Orléans, which unite the Loire with the Loing, a tributary of the Seine. The canal of Brittany, the longest of all (230 miles), which runs between Nantes and Brest. The total number complete in 1837 was 74; besides which, 16 were in process of construction, and 14 others were projected.

The External Trade, though considerable, is by no means commensurate with the natural productive powers of the country, its advantageous position, or the ingenuity and enterprise of the people. This is mainly to be ascribed to the system acted upon by successive governments of protecting native industry, and excluding foreign products, with the view of rendering France independent of other countries. This system was introduced in 1667 by M. Colbert, then minister of finance to Louis XIV.; and the *prestige* that has attached to his name has tended materially to prolong this regulating mania. Its depressing effects are now seen and acknowledged by the generality of the mercantile class, and even by the government; but the influence of both has hitherto been overpowered and superseded by a combination of the sinister interests which it has been the means of creating; and even since the return of peace in 1815, the ordonnances of a pernicious tendency have been many and stringent, while those of a liberal character have been few and unimportant.

The principal articles of export are,—wine, brandy and liqueurs, salt, raw silk, wax, tallow, hides, wool, olive, rape, linseed and other oil, tobacco, flax, iron and steel, and colonial produce re-exported; besides the following manufactured goods, namely, silks, woollens, linen and hempen cloth, cottons, hardwares, perfumery and articles of fashion, hats, jewellery, and household furniture. The chief articles of import are,—of raw materials, silk, wool, hemp, flax, and cotton; of metals, iron and steel, lead, copper, tin, and bullion; of manufactured goods, hardwares and linen yarn; of colonial, tobacco. sugar, and coffee; besides the following miscellaneous articles, raw hides, tallow, bones and horns, olive oil, hard woods for cabinet ware, cheese, sulphur, and wax. The export and import of flax are nearly equal; of the coffee and tobacco imported, about one-half is re-exported, and of the sugar about one-seventh. The export of wax is about half the import; that of raw hides, one-fourth to one-third.

The foreign trade has increased greatly since the peace of 1815. During the continuance of war the commerce of the Atlantic ports was completely ruined, and that of the Mediterranean greatly harassed and interrupted by British cruisers; and the average annual amount of exports in the three years 1816, 1817, and 1818, was only £17,429,533; but in the course of the succeeding 20 years this amount was doubled, the average of the three years, 1836, 1837, and 1838, having been £35,670,531. The following tables show the nature, amount, and distribution of the foreign trade in the year 1838:—

STATEMENT of the Value of Merchandise imported into, and exported from France, dividing the Articles into certain Classes, and distinguishing the Trade by Sea and by Land, in the Year 1838.

DESCRIPTION.	IMPORTS.			EXPORTS.		
	By Sea.	By Land.	Total.	By Sea.	By Land.	Total.
ANIMAL PRODUCTIONS.	£	£	£	£	£	£
Live Animals	28,710	604,798	633,508	145,054	294,606	439,660
Animal Produce	3,223,738	5,041,844	8,265,582	2,790,873	329,115	3,119,988
Produce of Fisheries	678,295	25,858	704,153	136,102	15,482	151,584
Materials for Medicine and Perfumery	42,843	23,403	66,246	26,150	4,670	30,820
Hard Substances for Carving	118,596	4,234	122,830	15,731	919	16,650
VEGETABLE PRODUCTIONS.						
Farinaceous Food	719,686	134,802	854,488	824,642	85,771	910,413
Fruits	899,829	273,532	1,173,361	347,156	82,719	429,875
Colonial Produce	4,404,809	57,086	4,461,895	1,031,563	307,728	1,339,291
Vegetable Juices	1,449,610	39,269	1,488,879	657,245	123,024	780,269
Medicinal Substances	108,529	17,525	126,054	49,060	21,036	70,096
Common Wood (Timber)	828,530	507,400	1,335,930	163,492	102,499	265,991
Exotic Woods (Hard Woods)	239,361	3,622	242,983	37,813	6,489	44,302
Fruits, Stalks, and Filaments, for manufacturing purposes	4,737,311	121,845	4,859,156	292,766	718,369	1,011,135
Dyes and Tanning Stuffs	181,178	26,909	208,087	439,578	280,626	720,204
Other Produce and Waste	16,180	64,819	80,999	81,020	59,839	140,859
MINERAL PRODUCTIONS.						
Stones, Earths, and other Fossils	427,236	671,324	1,098,560	155,327	113.717	269,044
Metals	1,650,030	409,552	2,059,582	314,005	286,253	600,258
MANUFACTURED GOODS.						
Chemical Preparations	239,101	22,305	261,406	286,870	99,342	386,212
Prepared Dyes	1,286,438	24,102	1,310,540	204,517	145,833	350,350
Colours	13,076	16,012	29,088	37,557	40,875	78,432
Various Compositions	103,283	173,122	276,405	701,706	337,077	1,038,783
Liquors, of all kinds	45,832	8,640	54,472	2,635,819	262,653	2,898,472
Vitrifications	43,524	35,809	79,333	538,958	147,228	686,186
Threads	865,357	131,277	996,634	92,169	107,257	199,426
Woven Goods and Felt	1,840,229	2,918,337	4,758,566	11,936,244	4,880,429	16,816,673
Paper, and Fabrications of the same	42,795	39,025	81,820	397,532	210,266	607,798
Various Manufactures	934,447	917,175	1,851,622	3,452,205	1,381,330	4,833,535
Total	25,168,553	12,313,626	37,482,179	27,791,154	10,445,152	38,236,306

Statement showing the Amount of the Import and Export Trade of France with the different Countries of the World, in the Year 1838.

	Imports.	Exports.		Imports.	Exports.
Europe.	£	£	China	£48,149	£11,512
Russia	1,292,819	539,828	Cochin-China, &c.	53,751	33,252
Sweden	202,711	41,655			
Norway	440,339	88,576	*America.*		
Denmark	33,144	78,556	United States	5,311,827	6,827,921
Prussia	838,762	361,594	Hayti	290,413	202,131
Hanse Towns	397,352	831,018	British Possessions	....	28,049
Mecklenburg-Schwerin	14,124	15,275	Spanish ——	459,676	602,915
Holland	837,359	877,014	Danish ——	35,961	151,616
Belgium	3,723,856	2,206,461	Dutch ——	8	826
Great Britain	3,797,701	5,602,145	Brazil	379,425	918,295
Portugal, Azores, &c.	61,080	90,113	Mexico	176,603	324,261
Spain	1,418,592	3,033,093	Central America	106,690	13,194
Austria	206,197	411,678	Venezuela	51,361	70,396
Sardinian States	4,469,388	2,380,815	New Granada	19,784	17,419
Two Sicilies	899,033	541,782	Peru	890	103,895
Tuscany	632,360	719,091	Bolivia	....	14,376
Roman States, Lucca	38,373	107,897	Chili	132,333	307,348
Switzerland	2,678,000	3,445,823	States of Rio de la Plata	255,319	201,113
Germany	2,180,175	1,794,017			
Greece	15,713	84,367	*French Colonies.*		
Turkey	1,090,995	657,279	Guadaloupe	860,474	607,708
			Martinique	684,496	623,780
Africa.			Bourbon	844,824	549,835
Egypt	137,832	151,068	Senegal	212,455	472,224
Algiers	66,697	1,011,431	Cayenne	109,399	136,692
Barbary States	240,137	210,566	St Pierre and Miquelon, and the fisheries	488,976	227,171
Cape of Good Hope and Mauritius	24,172	273,328	Wrecks and salvage	14,759	....
Other parts	22,933	52,710			
			Total merchandise	37,482,179	38,236,306
Asia.			Specie imported (one-half from Great Britain)	6,907,087	
E. Indies, British, and Australia	723,204	108,481	Specie exported		2,288,936
E. Indies, Dutch	249,194	57,355			
.... French	212,344	17,361		44,389,266	40,525,242

Statement showing the Number and Tonnage of Vessels engaged in the Foreign Trade of France, which Entered and Cleared at Ports in that Country, distinguishing French from Foreign Vessels, and those employed in the Direct from those employed in the Carrying Trade, also the Value of their Cargoes, in the Year 1838.

Vessels and Trade.	Entered.			Cleared.		
	Vessels.	Tons.	Cargoes.	Vessels.	Tons.	Cargoes.
			£			£
French, exclusive of coasters	6,081	657,084	12,695,120	5,557	569,882	11,040,156
Foreign, in direct trade with the country to which they belong	6,812	844,213	10,671,384	5,126	463,342	14,340,416
Foreign, in carrying trade	1,194	170,527	1,802,044	1,194	148,123	2,410,568
Total	14,087	1,671,824	25,168,548	11,877	1,181,347	27,791,140

The number and tonnage of merchant vessels, which belonged to the ports of France on 31st December 1838, were as follows:—Of 30 tons and under, 10,623; between 30 and 60 tons, 1019; between 60 and 100 tons, 1515; between 100 and 200 tons, 1263; between 200 and 300 tons, 606; between 300 and 400 tons, 213; between 400 and 500 tons, 68; between 500 and 600 tons, 15; between 600 and 700 tons, 2; of 800 tons (1164) and upwards, 1; total number of vessels, 15,326, and of tons, 696,978.

The Trade between France and Great Britain is inconsiderable, when viewed with reference to the vast capabilities of the two countries to supply their mutual wants, and to their near neighbourhood to each other. This is to be attributed to the exclusive policy introduced by M. Colbert, and afterwards imitated in our own country; and to the long continuance of that feverish state of mutual jealousy and hatred which was ever and anon breaking out into fierce and protracted contests of arms,—influences which, until a recent period, have led the two nations to act as if each had no higher interest than at any cost to keep itself independent of the other, and to their commercial intercourse being, as it was in most other respects, little more than a connexion of opposition. At one period, indeed, sounder views seemed likely to prevail. In 1786, Mr Pitt concluded the treaty commonly called the *Eden treaty*, after Mr William Eden (subsequently Lord Auckland), the negotiator, which was favourable in the highest degree to the extension of commercial relations between France and Great Britain; but this treaty continued in operation only until 1791, when its provisions were supplanted by a new tariff, reimposing the former prohibitory duties; and the system then restored may be said to have been adhered to down to the present day, at least on the part of France, in all its leading principles.

At different periods since the peace of 1815, attempts have been made to extend commerce between the two countries. In Great Britain, the discriminating duty on French wines has been repealed; the silk manufactures, formerly prohibited, are now admitted upon a scale of duties which causes a considerable trade in them to be carried on, and at various times the duties have been reduced in a considerable degree upon many minor articles of French produce; while in France these concessions have been met with a corresponding spirit. But viewed as a whole, what has been effected is trifling, when compared with what yet remains to be done. Those great British staples, coal and iron, articles of which France is deficient, are yet loaded by her with prohibitory duties; restrictions are likewise imposed by her on hardware, cutlery, cottons, yarns, and many other products of English industry. On the other hand, the duties levied in the United Kingdom on brandy, and even many descriptions of French silks and wines, are much too high. Happily the importance of further relaxations is appreciated by the two governments, as well as by the great body of the consumers in both countries, so that there is now some prospect that their commercial intercourse will be allowed to grow up to its natural level.

TRADE of the United Kingdom with France at different Periods.

Years.	Official Value.				Declared Value of British and Irish Produce and Manufactures exported to France.
	Imports from France.	Exports to France.			
		British and Irish produce and manufactures.	Foreign and Colonial Merchandise.	Total Exports.	
	£	£	£	£	£
1785	334,370	368,037	354,020	722,057	....
1795	41,690	....	78,653	78,653	....
1805	494,749	199	353	552	....
1815	754,372	214,824	1,228,856	1,443,680	298,292
1820	775,132	334,087	829,814	1,163,901	390,745
1825	1,835,985	279,212	892,403	1,171,615	360,710
1830	2,317,686	486,284	181,065	667,349	475,884
1835	2,746,999	1,561,915	505,346	2,067,261	1,453,636
1836	3,125,978	1,700,665	644,950	2,345,615	1,591,381
1837	2,707,587	2,036,844	839,207	2,876,051	1,643,204
1838	3,431,119	3,193,923	691,080	3,885,003	2,314,141
1839	4,022,526	3,118,410	514,243	3,632,653	2,298,307

The principal exports from France into the United Kingdom in the year 1839 were as follow:—Apples (official value), £20,651; baskets, £5660; books, £13,729; boracic acid, 211,093 lbs.; boxes, £13,593; brimstone, 199,104 cwts.; clocks, £27,069; cork, 2531 cwts.; wheat, 278,181 quarters; barley, 105,326 quarters; beans, 27,004 quarters; other grain, 8806 quarters; flour, 115,502 cwts.; cotton manufactures, £41,700; eggs, No. 90,834,163; needlework, £19,683; flax and tow, 78,607 cwts.; flowers, artificial, £20,933; furs, martin, No. 13,826; glass bottles, 1,215,426 qts. Imp. measure; hair, human, 8861 lbs.; hats of straw, No. 5801; hemp, 19,546 cwts; leather manufactures, viz. gloves, 1,007,889 pairs; boots and shoes, 48,824 pairs; and other articles, £5748; linen articles, viz. cambrics and bordered handkerchiefs, 34,598 pieces; and of other sorts, £7612; madder, 58,044 cwts.; madder-root, 13,211 cwts; nuts, viz. walnuts, 14,131 bushels; oil of olives, 11,113 gallons; and of thyme, 6567 lbs.: ochre, 3779 cwts.; paper for hangings, 29,444 sq. yds., and other sorts, 61,946 lbs.; pictures, No. 2316; platting, &c. for straw bonnets, 34,957 lbs.; plums and prunelloes, 8169 cwts.; prunes, 18,998 cwts.; prints and drawings, No. 113,803; quinine (sulphate of), 55,477 ounces; rapeseed and other oil cakes, 287,933 cwts; salt, 39,476 bushels; seeds, clover, 26,530 cwts.; onion, 42,399 lbs.; tares, 22,040 bushels; silk (chiefly re-exported from Italy), raw, 1,018,901 lbs.; waste, knubs, and husks, 568,754 lbs.; thrown, dyed 1711 lbs., and undyed 212,820 lbs.; silk manufactures, namely, plain or figured, including ribands, 220,517 lbs.; gauze and gauze ribands, 18,127 lbs.; crape, 3295 lbs.; velvet, 9254 lbs.; fancy silk net, 3582 lbs.; lace, 1733 lbs.; other sorts, £120,925: skins, kid, 529,995; spirits, brandy, 1,936,172 gallons; verdegris, 62,859 lbs.; watches, £17,963; water, Cologne, 54,685 flasks; wine, 485,051 gallons; wool, sheep's, 83,141 lbs.; woollen manufactures, £132,719. The chief articles on which an increase has taken place of late years are, raw silk and silk manufactures, wine, glass bottles, eggs, gloves, boxes, brimstone, clocks and watches, straw platting, quinine, oil-cake.

The principal articles of British produce and manufactures imported into France from the United Kingdom in the same year were as follow:—Apothecary wares (declared value), £11,049; apparel, &c. £22,696; arsenic, 5047 cwts.; books, £8347; coals, 340,373 tons, £116,961; copper smelted from foreign ore, 84,567 cwts. £363,637; cotton manufactures, namely, calicoes, muslins, fustians, &c., 2,721,568 yds., £58,528; lace and patent net, 11,849,800 yds., £53,092; hosiery and small wares, £40,259; cotton twist and yarn, 70,191 lbs., £37,884; earthenware, £3099; hardwares and cutlery, £67,478; horses, No. 418, £19,565; iron and steel unwrought, £76,395; iron, wrought, £16,964; lead and shot, £12,776; linen manufactures, £247,686; and yarn, 12,259,254 lbs., £644,144; machinery, £182,329; silk manufactures, £11,648; silk twist and yarn, £32,980; tin, unwrought, 9795 cwts., £37,020; tin plates, £8796; wool, sheep's, 876,166 lbs., £68,176; woollen and worsted yarn, 153,329 lbs., £29,495; woollen manufactures, £51,493. The increase of late years has chiefly occurred on the following articles, namely:—Linen manufactures and yarn (which now amount to about two-fifths of the whole), coal, copper smelted from foreign ore, cotton lace and net, small wares, twist and yarn, hardware, machinery, silk twist and yarn, and woollen yarn. Besides British products, various foreign and colonial articles are imported from the United Kingdom, the principal being, cinnamon, cochineal, unwrought copper, cocoa, Indian silks (chiefly bandanas and handkerchiefs) and cottons, shellac, goat's hair manufactures, indigo, castor oil, pepper, quicksilver, precious stones, saltpetre, spelter, and cotton wool.

In addition to the trade just described, a considerable intercourse is conducted by those effectual reformers of faulty tariffs,—the smugglers. This illicit trade chiefly consists in conveying brandy from France to the S. coast of England, and in introducing some descriptions of yarns and lace into the former, across the frontier by way of Belgium. A great deal of curious information upon this subject is to be found in the Reports in 1832 and 1834, by Mr Villiers and Dr Bowring, on the commercial relations between France and Great Britain; though, since these reports were made, it is believed that in some branches, especially that of yarns, the irregular trade has decreased.

PRINCIPAL PORTS ON THE ATLANTIC.

These, stated in their order along the coast from N. to S., are, Dunkirk, Calais, Boulogne, St Valery-sur Somme, Dieppe, Fecamp, Harfleur, Le Havre, Honfleur, Caen, Cherbourg, Granville, St Malo, Brest, L'Orient, Nantes, La Rochelle, Rochefort on the Charente, Bordeaux, and Bayonne. Those of Cherbourg, Brest, and L'Orient are, as is well known, principal stations of the French navy. Of the mercantile ports the chief are the following:—

Dunkirk, the most northerly, lies in lat. 51° 2′ N., long. 2° 22′ E.; pop. 25,000. The harbour is large and commodious; but there is a dangerous bar at its mouth. It is a free port; and, being connected with several of the canals which intersect Belgium, it is a considerable emporium for wine, brandy, and other articles of French produce, for the supply of that country. The Newfoundland cod-fishery and the herring-fishery are also prosecuted to some extent. During the late war between Great Britain and France, numerous privateers were fitted out from it.

Le Havre, in lat. 49° 29′ N., long. 0° 6′ E. is, next to Marseilles, the principal commercial seaport of France. It is situated on the right bank of the Seine, at its mouth, which is several miles wide; distant 127 miles from Paris (by road), and 42 miles from Rouen; pop. exclusive of seamen, 25,618. The site of the town is low. The port is comprehended within the circuit of the town, and has communicating with it three basins, capable of accommodating about 500 vessels; but this is inadequate to the growing importance of its trade. At its entrance, which is fortified, is an old tower, built by Francis I., 70 feet in height, from whence signals are made. There are two roadsteads,—the outer or great road, in which large ships always lie, about a league from Havre, and having from 6 to 7½ fathoms water at ebb; the inner or little road, separated from the former by a sand-bank, about half a league distant, having from 3 to 3½ fathoms at ebb, but the rise of tide being about 25 feet, the largest merchantmen are enabled to enter the harbour. Being the principal port of Paris, most of the foreign and colonial produce destined for the consumption of that city is conveyed into it; while its proximity to the district, of which Rouen is the capital, renders it the chief place in France for the importation of cotton, as well as the great centre of the trade with the United States, with which there is a regular communication by means of packets, as at Liverpool. The annual value of the imports is about fr. 200,000,000, or £8,000,000. The chief exports are silk and woollen stuffs, lace, gloves, trinkets, perfumery, wines, and brandy; corn being sometimes exported, and at other times imported. In 1838, the total number of vessels that entered from foreign countries and French colonies was 1381, burden 335,687 tons; whereof belonged to France 563, burden 129,172 tons; to the United States 241, burden 100,860 tons; to Britain 361, burden 59,503 tons. In the same year, the number of coasting vessels which entered was 3034, burden 257,505 tons. At Havre an active intercourse is kept up, not only with Paris and various places on the coast, but with the principal ports of England, and of the N. and S. of Europe. In 1838, the number of steamers which entered was 558, burden 101,561 tons.

Nantes, in lat. 47° 13′ N., long. 1° 33′ W., is situated on the N. bank of the Loire, and derives its importance and prosperity from being the port of that river. The town is ancient and of historical celebrity; pop. 87,191. At spring-tides vessels of 200 tons come up to it; but at other times this can be accomplished only by craft not exceeding 100 tons. Larger ships either remain at Paimbœuf, 25 miles lower down, near the mouth of the river, or at least discharge part of their cargo there. Nantes contains several extensive manufactories, shipbuilding yards, and a victualling establishment for the navy,—provisions being very cheap. The exports are wine, brandy, vinegar, grain, flour, biscuit, butter, silks, woollens, and linens. The chief imports are colonial produce, cotton, indigo, and timber. In 1838, 437 vessels, burden 65,989 tons, entered from foreign countries and French colonies, and 4003 coasters, burden 135,180 tons.

Bordeaux, in lat. 44° 50′ N., long. 0° 35′ W., is situated in the department of Gironde, on the W. bank of the Garonne, which here makes a considerable bend, having the city and its extensive quays on its concave bank, in the form of the crescent moon. It is a very ancient town, and deservedly celebrated. Many of the houses are exceedingly elegant, and the general style of living is luxurious in a higher degree than in any other part of France, except Paris; pop. 95,000. The approach by water is magnificent. The river at its narrowest part is 720 yards across, with a depth of 16 feet at low, and nearly 30 feet at high water. The port is capable of accommodating upwards of 1000 vessels, and such as do not exceed 500 or 600 tons may enter at all times of the tide. Bordeaux is the principal outlet for the wines of the W. districts of France, and even of the southern and midland districts; and these, more especially claret, form its staple trade. The other exports consist of brandy, refined sugar, cattle, hides, provisions, flour, clover-seed, almonds, prunes, chesnuts, walnuts, cork, turpentine, resin, tartar, verdigris, linens, and colonial produce; these are shipped to various parts of Europe, America, the French colonies, or to India. The chief imports are, sugar, coffee, cocoa, cotton, indigo, and tobacco, mostly from the colonies; tin, lead, copper, coals, hardware, timber, hides, hemp, horns, beef, and fish, from Great Britain, the N. of Europe, and America. Its trade is greatly promoted by the Canal of Languedoc, which joins the Garonne, and of which Bordeaux forms the embouchure towards the Atlantic. Shipbuilding and various manufactures are carried on extensively; and there are two large fairs, one of which opens 1st March, the other on the 15th October. In 1838, 692 vessels, burden 112,025 tons, entered the port from foreign countries and French colonies, of which 99 vessels, burden 17,607 tons were British; besides these there entered 5920 coasters, burden 233,210 tons.

PRINCIPAL PORTS ON THE MEDITERRANEAN.

These, stated in their order from E. to W. are, Toulon (a celebrated station of the French navy), Marseilles, Arles, Cette, Agde, Port-Vendres.

Cette, in lat. 43° 24′ N., long. 3° 42′ E., is situated in the department of Hérault, on the narrow stripe of land which separates the étang or lagoon of Thau from the sea. It forms one embouchure of the Great Canal of Languedoc, a circumstance to which its rise and prosperity is alone attributable, as the port is not very good, nor has it the natural facilities for becoming so: it has also a canal communication with the Rhone; pop. 11,648. The harbour, which has from 16 to 19 feet water, and can accommodate about 400 vessels, is formed by two lateral moles, with a breakwater across the entrance. The moles are fortified, and on the principal one is a lighthouse, elevated 94 feet above the level of the sea. A considerable trade is carried on in the wines and brandies of Languedoc, of which Cette is the depôt. The salt-works on the adjoining lagoon are pretty extensive; as are also the fisheries, particularly that of sardines. About 130,000 tons of shipping (including coasters) enter annually.

Marseilles, in lat. 43° 17′ N., long. 5° 22′ E., is the principal commercial city and port of France. It is seated at the upper end of a gulf, covered and defended by many small islands, and is divided into the old town, or the city, and the new. In the former, the streets are narrow, and the houses mean; but in the latter, which communicates with the old by a fine street, the squares and buildings are beautiful; pop. about 125,000. Marseilles has been called Europe in miniature; it is the resort of foreigners of all nations, and the variety, continual bustle, and medley of languages which this occasions, are among its most striking features. The harbour is an oval, of more than half a mile long, and about a quarter of a mile broad, formed by a small inlet of the sea, running eastward into the heart of the city, which is built round it; and is capable of accommodating about 1200 vessels. It is very safe but not deep, and frigates cannot entér without difficulty. Opposite the mouth of it, which is narrow, not permitting the entry of more than one ship at a time, are the three small islands of If, Rattonneau, and Pomègue; and between the two last is a secure anchorage, where vessels perform quarantine. Exports, chiefly wines, brandy, silks, woollens, hosiery, linens, corn, dried fruits, oil, soap, leather, and colonial articles. Marseilles is a great emporium for Levant produce, and it also carries on an active intercourse with Italy, Spain, the Black Sea, Algiers, and other parts of Barbary. In 1838, the number of vessels which entered from foreign countries and French colonies was 3247, burden 481,355 tons; and the number of coasters 3900, burden 264,810 tons. In the same year, the number of steamers that entered was 621, burden 150,456 tons. The customs and other dues collected are estimated at £1,000,000 annually.

CORSICAN PORTS.

Bastia, the principal town and port, is situated on the E. coast, in lat. 42° 43′ N., long. 9° 26′ E.; pop. 12,846. The port is unsafe, and not adapted for large vessels. At its entrance is the celebrated rock "Il Leone," so called from its resemblance to a lion in repose, which answers the purpose of a breakwater. Exports, oil, wine, cattle, hides, goat-skins, coral, and wood. It carries on a considerable intercourse with Leghorn, from whence British manufactures and tobacco are smuggled into the island.

Ajaccio lies in a gulf on the N. side, in lat. 41° 55′ N., long. 8° 44′ E.; pop. 9000. Exports, wine, oil, and coral.

MEASURES, WEIGHTS, MONEY, FINANCES, &c.

MEASURES AND WEIGHTS.

The French measures and weights may be classed under three heads:—1. The Metrical System. 2. The Système Usuel. 3. The Ancient System.

1. *The Metrical System*,

Instituted in 1795, is used in government transactions, in wholesale trade, and for scientific purposes. It is founded upon the distance of the pole from the equator, the ten millionth part of which, denominated a *mètre*, is decreed to be the unit of length. The other units are—of surface, the *are*; of solidity, the *stère*; of capacity, the *litre*; and of weight, the *gramme*; and the Latin derivatives *déci* (tenth of), *centi* (hundredth of), *milli* (thousandth of), being prefixed to that expressing the unit, serve to denominate its subdivisions; while the Greek derivatives *déca* (ten), *hecto* (one hundred), *kilo* (thousand), *myria* (ten thousand), express its multiples. Thus déci-mètre denotes the $\frac{1}{10}$th of a mètre, and déca-mètre 10 mètres.

Mètre of 10 décimètres, 100 centi-mètres, or 1000 millimètres = 1·093633 Imp. yard, or nearly 39⅜ Imp. inches; and 32 mètres = 35 Imp. yds. nearly:—1000 mètres, 100 décamètres, or 10 hectomètres = 1 kilomètre, or metrical mile = 3280·899 Imp. feet = about 1093⅝ Imp. yds., or nearly 5 furlongs; and 10 kilomètres = 1 myriamètre, or metrical league = 6·213824 Imp. miles, or = 6 miles, 1 furlong, 28 poles, and 2⅓ yds.

Are (100 sq. mètres), or metrical perch of 10 déciares, or 100 centiares = 119·6033 Imp. sq. yds., or nearly 3 sq. poles and 29 sq. yds.; 100 ares, or 10 décares = 1 hectare = 2·471143 Imp. acres = 2 acres, 1 rood, 35 sq. poles, 11¼ sq. yds.; or 17 hectares = 42 Imp. acres nearly.

Stère (or cubic mètre) of 10 décistères = 35·316581 Imp. cubic feet or 1·308022 Imp. cubic yd.; and 10 stères = 1 décastère.

Litre (or cubic décimètre), of 10 decilitres, or 100 centilitres = 61·027052 Imp. cubic inches = 0.220097 Imp. gall., or about 1¾ Imp. pint; and 50 litres = 11 Imp. galls. nearly. 100 litres, or 10 décalitres = 1 hectolitre = 2·751207, or about 2¾ Imp. bush.; and 32 hectolitres = 11 Imp. qrs. nearly. 100 hectolitres, or 10 kilolitres (or cubic metres) = 1 myrialitre = 34·390086, or about 34 Imp. qrs. 3⅛ bush.

Gramme, weighing 1 cubic centimètre of water at its maximum of density, and containing 10 décigrammes, or 100 centigrammes = 15·434 troy grains; 1000 grammes, 100 décagrammes, or 10 hectogrammes = 1 kilogramme = 2 lbs. 3 oz. and 4$\frac{1}{16}$ drams, or 2·204857 lbs. avoirdupois; and 288 kilogrammes = 635 lbs. avoirdupois nearly; 100 kilogrammes, or 10 myriagrammes = 1 metrical quintal = 220·486 lbs. avoirdupois or 1 cwt. 3 qrs. 24 lbs. 7¾ ounces nearly; and 10 quintals, the weight of a cubic mètre of water = 1 millier or marine ton = 19 cwt. 2 qrs. 20 lbs. 13¾ oz.

2. *The Système Usuel*

Was established in 1812 for the purposes of retail trade, in consequence of the aversion shown by the common people to the innovations of the metrical system. It tolerates the names of the old measures necessary in the inferior departments of trade, while, by a slight alteration, the value of these measures is so fixed as to bear certain definite proportions to the metrical system. Its divisions, also, instead of being decimal, are chiefly binary, from the greater convenience of the latter in small transactions.

Toise usuelle = 2 mètres = 6 Imp. feet 6¾ inches.

Pied usuel = ⅙th of the toise.

Aune usuelle = 12 décimètres = 47¼ Imp. inches.

Litron usuel = 1 litre = 1¾ Imp. pint nearly.

Boisseau usuel = ⅛ hectolitre = 1 Imp. peck and 3 quarts, or 1⅜ peck nearly.

Livre usuelle = ½ kilogramme = 1 lb. 1 oz. 10¼ drams avoird., or 7717 troy grains.

3. *The Ancient System*

Is still partially employed, particularly in road measures.

Toise of 6 pieds de roi = 1·9490 mètre = 2·1315 Imp. yards, or about 6 feet 4¾ inches.

Aune of Paris = 1·1884 mètre = 46¾ Imp. inches.

Post league, of 2000 toises or 2 miles = 3·898 kilomètres or 4263 Imp. yards; Marine league of 20 to the degree, or 60 marine miles = 5·555 kilomètres = 6076 Imp. yards; League of 25 to the degree = 4·444 kilomètres = 4860 Imp. yards.

Arpent des eaux-et-forêts = 51·072 ares = 1·262 Imp. acre: Arpent commun = 42·2208 ares = 1·043 Imp. acre; Arpent de Paris = 34·1887 ares = 0·845 Imp. acre.

Muid, wine measure, of 36 setiers, 144 quarts, or 288 pintes = 268 litres = 58·985 Imp. gallons.

Muid, corn measure of Paris, of 12 setiers, 24 mines, 48 minots, 144 bois-seaux, or 2304 litrons = 18·72 hectolitres = 51·502 Imp. bushels.

Livre (*Poids de Marc*), of 2 marcs, 16 onces, 128 gros, 384 deniers, 9216 grains = 489·5 grammes = 7555 troy grains; the quintal of 100 livres = 107·928 lbs. avoird.

Bordeaux.—Tun of 4 barriques = 912 litres = 200·73 Imp. galls. Velte = 1⅔ Imp. galls. nearly.

MONEY.

The integer of account is the franc, which is divided into 100 centimes, and is equivalent to about 9½d. sterling. Prior to 1797, the money of account was the livre tournois of 20 sous each, of 12 deniers. 81 livres are equal to 80 francs.

The modern coins are as follow:—Gold pieces of 40 francs, worth 31s. 8¾d. sterling, and pieces of 20 francs, sometimes called Napoleons, or new Louis, equal to 15s. 10½d.; these are minted at the rate of 3100 francs from the kilogramme of standard metal of the fineness of 900 millièmes (thousandths), or $\frac{9}{10}$ths, the remedy of the mint being 2 millièmes in the weight, and the same in the fineness:—Silver pieces of 5, 2, 1, ¾, ½, and ¼ francs, minted at the rate of 200 francs from the kilogramme of standard metal of $\frac{9}{10}$ths fine, the remedy of the mint, allowed both on the weight and on the fineness, varying from 3 millièmes, that on 5 franc pieces, to 10 millièmes, that on ¼ franc pieces:—Billon or copper pieces of 20, 10, 5, 3, 2, and 1 centimes: the billon pieces for 10 centimes, or 1 décime, contain ⅕th part of silver. Of the old coins the principal are the louis d'or of 24 livres, worth about 18s. 9½d., the double louis d'or, and the silver écu of 6 livres, worth about 4s. 6½d., with halves, quarters, &c.; also the copper sou, accounted equal to 5 centimes.

The *retenue* or mint charge, according to the tariff of 1803, is 9 francs per kilogramme of gold of the purity of 900 millièmes, or 10 francs per kilogramme of fine gold, and 1½ per cent. on silver. Hence, if a kilogramme of gold $\frac{9}{10}$ths fine be carried to the mint, the amount returned in coin is 3091 francs instead of 3100 francs, the sum into which it is minted: for a kilogramme of silver $\frac{9}{10}$ths fine also, 197 francs only will be returned instead of 200 francs. The fixed mint prices at which gold and silver are thus issued are termed *tariff rates*, and all variations in their market-prices are expressed in agios or premiums upon such rates.

The par of exchange with London, deduced from the gold coins, is 25 francs 22½ cents, and from the silver coins, 25 francs 57 cents for £1,—the value of the franc being in the former case 9·52d., in the latter 9·39d.; but these rates are of little use in practice, as, while in this country gold forms the established medium of payment, in France, being undervalued by the mint regulations in respect to silver, it cannot (at least in large transactions) be obtained at the rate legally or nominally given to the coin, but must be purchased at its current market-price or premium. This premium, therefore, must always be taken into account in computing the metallic par for the purpose of the London exchange. At Paris, January 3, 1840, the quotation for gold was "7½ per mille premium," which at the rate of £3, 17s. 10½d. per ounce (British standard), produced an exchange of 25 francs 34 cents per £1, and made the franc equal 9·47d.

The usance of bills throughout France, and of bills on London, is 30 days' date. No days of grace are allowed.

BANKS, &c.

The *Bank of France* was established on its present footing in Paris in 1803, but a similar national institution existed in that city under different forms and designations, from the year 1716. It received a grant for 40 years; and its original capital was fr. 70,000,000, divided into 70,000 shares (*actions*), each of fr. 1000, which, however, was soon increased to fr. 90,000,000 (£3,600,000). The bank has since repurchased 22,100 of these shares, thereby reducing its actual capital to fr. 67,900,000 (£2,716,000). It circulates notes for fr. 500 and upwards, payable in specie on demand, receives deposits, and discounts bills of exchange; it also makes advances on bullion and other securities. It likewise undertakes the care of plate, jewels, title-deeds, and securities of all kinds; the charge for which is ⅛th per cent. on their value for every period of 6 months or under. Its affairs are managed by a governor and deputy-governor, nominated by the king, and by 17 regents, and 3 censors, elected by 200 of the principal shareholders. A statement (*compte rendu*) of the bank's affairs is published annually; and the following is a copy of that issued in April 1841:—

Amount of bullion on hand	fr. 245,097,496·22
Commercial bills discounted .	122,198,024·94
Advanced on the security of bullion	14,473,100·00
Advanced on public securities .	6,221,841·65
Branch banks, debtor . .	14,332,514·70
Capital of branch banks . . .	12,000,000·00
Amount of reserve, according to law of 1834 . . .	10,000,000·00
Amount vested in public securities	50,177,832·80
Hotel and furniture of the bank .	4,000,000·00
Sundries	457,746·73
	478,958,557·04

Contra.

Bank notes in circulation, not comprising branch banks	fr. 233,500,000·00
Notes payable to order . .	1,219,310·50
Treasury account-current .	90,950,412·96
Sundry accounts-current .	62,518,059·98
Receipts payable at sight . .	4,434,500·00
Capital of the bank	67,900,000·00
Reserve, according to law of 1834	10,000,000·00
Fixed reserve	4,000,000·00
Unclaimed dividends	428,195·73
Draughts of branch banks outstanding	254,849·53
Sundry accounts	3,753,228·34
	478,958,557·04

The Bank of France has branches in various places; in addition to which, there were in 1838 the following other establishments issuing paper; namely, the banks of Bordeaux, Rouen, Lyons, Nantes, Marseilles, and Lille. Of these six departmental banks, the aggregate capital, in the year just mentioned, was fr. 14,550,000; specie on hand, fr. 14,583,000; notes in circulation, fr. 35,199,000; deposits, fr. 7,971,000.

Besides these, there is the Havre, and a variety of other joint-stock banks in the provinces. The Lafitte Bank, lately established at Paris, issues "bank bills" bearing interest.

The French commercial code recognises three kinds of commercial societies for purposes of a permanent nature; namely, 1st, Societies "en nom Collectif," or common partnerships; 2d, Societies "en Commandite," the nature of which we have already described [COMPANY]; and 3d, Anonymous societies. These last resemble joint-stock companies in this country. Their capital is divided into shares; each holder is liable only to the amount of those which he possesses; and the business is carried on by a few individuals elected by the shareholders, who are not personally responsible to the public. According to a report of the French Chambers, the number of companies of the two latter classes established in France from 1826 to the close of 1837, was,—Societies en Commandite, 1106; joint-stock companies, 157. Of the former, there relate to journals, periodicals, and books, 401; manufactures, 95; coaches and modes of conveyance, 93; forges, metals, and the coal trade, 60; navigation, 52; banks, 40; insurance, 27; agriculture, 25; theatres, 24; miscellaneous, 289. The shares of the companies are generally divided into very small sums, some as low as 10 and 5 francs.

FINANCES.

The following is an account of the public revenue and expenditure for the year 1838:—

Revenue.

Land-tax, &c. . .		fr. 261,852,762
Poll-tax & house-tax		55,289,000
Door & window taxes		29,279,107
License duties . .		35,606,000
Registration duties, fr.	174,960,000	
Stamps	31,200,000	
Sale & auction duties	5,650,000	
		211,810,000
Timber & other forest produce . . .	32,478,633	
Fishing duties . .	400,000	
		32,878,633
Customs duties, &c.	105,126,000	
Salt tax	55,534,000	
Excise duties on liquors, &c. . . .	85,040,000	
Sale of tobacco . .	77,850,000	
Sale of gunpowder .	4,720,000	
Sundries	37,895,000	
		366,165,000
Postage of letters .	35,900,000	
Packets, &c. . .	9,355,000	
		45,255,000
Weights & measures, brevets, &c. . .		9,076,000
Sum of ordinary taxes		1,047,211,502
Revenue from Algiers	1,700,000	
Revenue from India	1,000,000	
Interest on Spanish loan	1,892,576	
Sundries, including repayment of loans to commercial houses in 1830	1,800,000	6,392,576
	Total fr.	1,053,604,078
	Or	£42,144,163

Expenditure.

Interest, &c. on public debt		fr. 276,016,496
Pensions		52,540,000
Civil list		13,000,000
Chambers of peers and deputies, and legion of honour . . .		3,205,300
Ministry of Justice .		18,685,045
—— Religion . . .		35,439,500
—— Foreign affairs		7,370,622
—— Public instruction		12,997,673
—— Interior . . .		74,727,276
—— Public works, viz.		
Royal roads & bridges	23,260,000	
Ports & internal navigation . . .	13,135,000	
Other expenses . .	17,934,878	
		54,329,878
Ministry of war, viz.		
Expenditure in France	202,189,055	
Occupation of Ancona	791,552	
African possessions	25,743,309	
		228,723,916
Ministry of marine and colonies:—		
Seamen and marines	22,966,300	
Shipbuilding . .	18,069,600	
Colonies	7,620,600	
Sundries	16,343,500	
		65,000,000
Administration of finance		21,534,060
Collection of taxes .	119,870,150	
Reimbursements .	53,828,134	
		173,698,284
	Total fr.	1,037,268,050
	Or	£41,490,722

Besides the state revenues, various taxes are levied by the communes, for defraying their own expenses: Of these the principal is the *octrois*, or duties levied in the towns on all goods which pass through their barriers, the produce of which is applied to defray the expenses of hospitals, poor-houses, and other local charges.

Debt.

The annual charge on account of the public debt on 1st January 1838, consisted of the following sums:—

Rentes, 5 per cent. . .	fr. 147,053,472
—— 4½ per cent. . .	1,096,600
—— 4 per cent. . . .	11,978,265
—— 3 per cent. . .	35,905,696
Sinking fund . . .	44,616,463
Interest and sinking fund on loans for canals and bridges . .	9,936,000
Consolidated debt and sinking fund	250,516,496
Interest of *Capitaux des cautionnements* . . .	9,000,000
Floating debt . . .	10,000,000
Annuities and pensions . .	58,050,000
Total fr.	327,566,496
Or	£13,102,660

The dividends on the 5, 4½ and 4 per cent. rentes are payable on 22d March and 22d September; those on the 3 per cents on 22d June and 22d December.

The rentes are the only French securities negotiable in England. They are either in bonds of various amounts, payable to the bearer, or are inscribed in the name of the holder in the record of the public debt. The former pass from hand to hand without the necessity of a written assignment; and the dividends to English holders are payable by Messrs Rothschild, at the current rate of exchange, upon the coupons being left for a few days at their office. In order to assign the inscribed rentes, however, the seller must grant a power of attorney, authorizing some party in Paris to sign the transfer in the record book; on completing which, a certificate of the inscription is issued, which must be returned in case of a new assignment. The dividends on the inscribed rentes are payable in Paris, where they can be received by an agent, duly authorized by power of attorney.

The public debt of France, after deducting the sinking fund, now exceeds £200,000,000 sterling. It has increased considerably since the conclusion of the war in 1815; the ordinary revenues during the 26 years that have since elapsed having been seldom equal to the expenditure. This was more particularly the case in the first four years of the period owing to the expenses of the army of occupation (£18,985,524), and the contributions paid to the allies (£53,585,524). A considerable augmentation of charge was also occasioned between 1821 and 1823 by the invasion of Spain; in 1828, by the invasion of the Morea; and in 1830, and subsequent years, by the occupation of Algiers, and the state of circumstances which arose out of the revolution in July in that year. At the commencement of 1836, it was stated by M. Humann, minister of finance, that the debt had been increased since July 1830 by about fr. 800,000,000 (£32,000,000), entailing a charge of fr. 40,000,000 (£1,600,000) per annum. To these causes of increased debt has to be added the hostile demonstrations which arose out of the line of policy adopted by M. Thiers in 1840, and the fortifications of Paris.

Abstract of Convention of Commerce and Navigation between Great Britain and France, January 26, 1826. (*Hertslet's Treaties*, vol. iii. p. 123.)

The two powers being animated by the desire of facilitating the commercial intercourse between their respective subjects; and being persuaded that nothing can more contribute to this object than to simplify and equalize the navigation regulations of both kingdoms, by the reciprocal abrogation of all discriminating duties levied upon the vessels of either of the two nations in the ports of the other;—have named as their plenipotentiaries, to conclude a convention for this purpose, that is to say, his Majesty the King of Great Britain and Ireland, the Right Honourable George Canning and the Right Honourable William Huskisson; and his Majesty the King of France and Navarre, the Prince Jules, Count de Polignac; who have agreed upon and concluded the following articles:—

I. French vessels coming from or departing for France, or, if in ballast, from any place, shall not be subject in the ports of the U. K. to any higher duties of tonnage, harbour, light, pilotage, or other similar duties than those to which British vessels, in respect to the same voyages, are subject; and, reciprocally, British vessels placed on the same footing in the ports of France. But the French king reserves to himself to regulate the amount of such duties in France according to the rate at which they may be established in the U. K.; with the disposition, however, to reduce the amount of the said burthens in France in proportion to any reduction hereafter made of those now levied in the U. K.

II. Goods which may be legally imported into the U. K. from France, if imported in French vessels, shall be subject to no higher duties than if imported in British vessels; and reciprocally as regards importations in British vessels into France. The produce of Asia, Africa, and America, not being allowed to be imported into the U. K. (except for warehousing and re-exportation) in French vessels, nor from France in British vessels, the King of France reserves to himself to direct, that, in like manner, such produce shall not be imported into France (except for warehousing and re-exportation) in British vessels, nor from the U. K. in French vessels.

With regard to European productions, it is understood that such shall not be imported in British ships into France for consumption, unless laden therewith in some port of the U. K.; and the British king may adopt, if he think fit, some corresponding restrictive measure with reference to French vessels.

III. All goods which may be legally exported from either of the two countries, shall, on their export, pay the same duties, whether such exportation be made in British or French vessels, provided they proceed direct from the one country to the other. And all such goods shall be reciprocally entitled to the same bounties, drawbacks, and other allowances.

IV. The vessels of any third power shall in no case obtain more favourable conditions than those herein stipulated.

V. Fishing boats of either country forced by stress of weather to seek shelter in the other, not subject to duties or port-charges, provided they have not effected any landing or shipment of goods.

VI. This convention shall be reciprocally in force in all European possessions of the two powers.

VII. The convention to exist for 10 years from April 5, 1826; and further, until the end of 12 months after either of the parties shall have given notice to the other of its intention to terminate its operation.

Additional Articles (Jan. 26, 1826).

I. French vessels allowed to sail from any French possession to all British possessions (except those of East India Co.), and to import into them all kinds of goods produced in French possessions, except such as are prohibited to be imported into said colonies, or are only permitted from British possessions; and the said French vessels and merchandise shall not be subject to higher duties than British vessels importing the same merchandise from any foreign country, or which are imposed on the merchandise itself.

The same facilities shall be granted reciprocally in the colonies of France. And as all foreign merchandise may now be imported into British colonies in the ships of the country producing the same, except a limited list of articles, which can only be imported in British ships, the king of the U. K. reserves the power of adding to such excepted articles any other of French produce which may appear necessary for placing the colonies of the two countries upon a fair footing of reciprocity.

II. Similar privileges, reciprocally granted to the vessels of the two powers exporting merchandise from their respective colonies.

These two articles to have the same validity as if inserted in foresaid convention.

FRANKFORT, a small republican state on the confines of Bavaria, consisting of the city of Frankfort on the Maine and the adjacent territory. Area, 90 sq. miles. Population, 63,936. The government is vested in a senate, a permanent committee of burgesses, and a legislative body.

The city of Frankfort is now the chief money market of Central Germany, and banking, including exchange operations, is its principal source of wealth. It is likewise a place of considerable transit for wines, English, French, and Italian goods, German wools and manufactures, and colonial produce; while the inhabitants of the adjacent villages, within the republic, follow the occupation of carriers through many states of Germany. Two extensive fairs are held in the city; one beginning properly on Easter Tuesday, the other on the Monday nearest to the 8th of September; but they usually commence from one to two weeks previously. The trade at these fairs, however, as well as of the town in general, which is that of an entrepôt, has declined since the establishment of the Prussian Commercial Union, the effect of which has been to remove those obstacles to free intercourse which previously existed between many of the German States. This Union was at first resisted by Frankfort, but being surrounded on all sides by confederated states, it was obliged to give its accession, in order to prevent the greater evil of absolute isolation.

Measures and Weights.—The foot = 11·42, and the ell 21·54 Imp. inches, or 100 ells = 59·85 Imp. yards; Dutch commodities, however, are commonly sold by the Brabant ell, and French commodities by the Paris aune.

The ohm of 20 viertels, 80 old mass, or 90 new mass (each mass of 4 schoppen) = 31·57 Imp. gallons.

The achtel or malter of 4 simmers, 8 metzen, or 16 sechters = 3·16 Imp. bushels.

The heavy pound contains 2 marcs, 32 loths, or 128 drachmes; the light pound is similarly divided, and 100 heavy lbs. or centner weight = 108 lbs. light weight; also 100 lbs. heavy weight = 111·43 lbs. avoird., and 100 lbs. light weight = 103·18 lbs. avoirdupois.

Gold and silver are weighed by the Cologne mark, the Frankfort standard of which contains 3611 troy grains, and their fineness is expressed in the manner explained under the head GERMANY.

Money.—Accounts are stated in florins of 60 kreusers, or in rixdollars current of 90 kreusers; and 1 rixdollar = 1½ florin = 22½ batzen. These denominations, however, differ in value according to the standard of the money in which they are reckoned. Official payments are commonly made in *Convention* (or 20 florin rate) money; ordinary payments in the new (24½ florin rate) standard introduced in 1838, in which the value of the florin is 19·90d., or about 1s. 8d. [GERMANY]; and bills in *Wechsel-Zahlung*, or exchange-reckoning. The last is an imaginary money, valued at the rate of 9 florins, 12 kreusers for the gold carolin,—the same coin being reckoned in Convention money at 9 florins 10 kreusers. Hence 276 exchange florins = 275 Convention florins; and as the value of the Convention florin is 24·37d., we have in Wechsel-Zahlung the florin = 24·29d., the rixdollar = 36·43d., the batze, in which the exchange with London is reckoned = 1·62d., and the par 148¼ batzen per £1.

Usance of bills not payable at the fairs is 14 days' sight. The days of grace are 4; but none are allowed on bills at less than 4 days' sight or date.

Finances.—Annual revenue about £67,000. Public debt nearly £750,000.

FRANKINCENSE, a name given to two very different substances; namely, OLIBANUM and BURGUNDY PITCH, under which heads they are respectively described; the former is the Thus or frankincense of the ancients.

FREIGHT in the contract of affreightment [AFFREIGHTMENT] is the sum which the merchant pays for the safe conveyance of cargo or the use of the vessel. Freight is generally said not to be strictly due, except on the arrival of the vessel with the cargo. If it has been necessary to abandon the vessel, however, freight will be earned by conveying the goods to their destination by the best method which circumstances will admit of. Freight will not be lost in consequence of interruption, such as capture and recapture. If goods be thrown overboard, in pursuance of the *Lex Rhodia de jactis*, freight must be paid, and ranked [AVERAGE]. If the freight is calculated by time, it begins to run from the period of the ship's breaking ground and commencing her voyage. When, in the case of a charter-party, in which the merchant bargains for carrying so much cargo, and he fail to produce the full quantity, compensation is due for the damage to the owner, by reason of his having to look out for another cargo, or to let his vessel lie partly unoccupied: this is occasionally called *Dead Freight*. The shipmaster has a lien on the cargo for freight; but there is none on the goods conveyed for dead freight. If the merchant demand his goods before the stipulated voyage has been accomplished, full freight is due. In a charter-party, the shipper is liable for freight, unless there be a stipulation to the contrary, and where the ship is on general freight, he is likewise in the ordinary case liable; but there may be circumstances in which the responsibility is transferred to the consignee. "The consignee or indorsee of the bill of lading may be sued, if he have received the goods *in pursuance of a bill of lading*, imposing the payment of freight upon him; at all events, in cases where there is no charter-party. But the acceptance of the goods is not *of itself* sufficient to impose charges in respect thereof, although other circumstances concurring with acceptance may; and if there be not only a bill of lading, but a charter-party containing an express contract by the charterer to pay freight, the law will not, from his mere receipt of goods under the bill of lading, raise an implied promise from an indorsee to do so, in the absence of an express one." (*Smith's Mercantile L.*, 258, 259. *Shee's Abbot*, 359-424.)

FRIENDLY, OR BENEFIT SOCIETY, is in a late act defined somewhat vaguely to be an association "for the mutual relief and maintenance of all and every the members thereof, their wives, children, relations, or nominees, in sickness, infancy, advanced age, widowhood, or any other natural state or contingency whereof the occurrence is susceptible of calculation by way of average." But in practice such societies generally aim at only three objects,—1*st*, The making provision for an allowance to their members during sickness; 2*d*, For an allowance in old age; and 3*d*, For a payment at death.

It would be difficult to trace at what precise time friendly societies in their present form took their rise. The advantages of associations of this kind, however, seems to have been appreciated at a very early period, although they did not attract the attention of the legislature until 1773, and there was no statutory enactment for their regulation prior to the year 1793, when the act was passed which is known by the name of its author, Mr George Rose. The provisions of that statute were extended and improved by others in 1795, 1803, 1809, 1817, and 1819, by which time the number of societies that had been formed in the United Kingdom was very great. But the principles upon which they should be conducted were so little understood, and their management so often confided to persons unqualified for the trust, that the common result was a speedy dissolution. Even in the best regulated, the sickness contributions had to be founded on supposition, as no steps were taken to ascertain, from actual observation, the average rates adapted to different periods of life, until this was undertaken by the Highland Society. Their report, published in 1824, was the means of arousing public attention to the errors and defects of friendly societies as then constituted; and in 1825 and 1827 further light was thrown upon the subject by the reports of the Select Committees of the House of Commons appointed in those years. These reports prepared the way for the passing of the act 10 Geo. IV. c. 56, which, with the 4 & 5 Wm. IV. c. 40, and 3 & 4 Vict. c 73, embodies the whole of the existing statutory regulations for the guidance of friendly societies. The following are the principal enactments :—

The rules, before being sanctioned, must specify the purpose of the society, and embody directions for the application of the funds for such purpose, in terms of the provisions of the acts, and in consistency with the privileges conceded by them. They must specify the place of meeting of the society, and contain provisions as to the powers and duties of the members at large, and of the committees and office-bearers; also whether disputes are to be referred to the justices of the peace or to arbiters. (10 Geo. IV. c. 56, §§ 3, 10, 27.)

Two transcripts of the rules, signed by three members, and countersigned by the clerk or secretary (accompanied, in the case of an alteration or amendment of the rules, with an affidavit of one of the officers of the society, that the statutory provisions have been complied with), with all speed, after the same shall be made, altered, or amended, and so from time to time, after every making, altering, or amending thereof, shall be submitted in England and Wales to the barrister-at-law (at present John Tidd Pratt, Esq., No. 4, Elm Court, Temple, London), appointed to certify the rules of savings banks; and in Scotland to the Lord Advocate, or any depute appointed by him for that purpose: and in Ireland to such barrister as may be named by the Attorney General; who shall ascertain whether such rules, alterations, or amendments are calculated to carry into effect the intention of the parties, and are in conformity to law, and to the said acts, and shall give certificate of the same on each of the said transcripts, or point out in what respect the said rules are repugnant thereto; for all which the said barrister or advocate shall receive no further fee at any one time than a guinea; and one of such certified transcripts shall be returned to the society, and the other transmitted by the barrister or advocate to the clerk of the peace for the county wherein such society shall be formed, and by him laid before the Justices at the General Quarter Sessions, or adjournment thereof, held next after the time when such certified transcript shall have been transmitted to him; and the said Justices are authorized and required, without motion, to allow and confirm the same; and such transcript shall be enrolled without fee, and all rules, alterations, and amendments, shall be binding from the time when certified. (4 & 5 Wm. IV. c. 40, § 4.)

Barrister not to be entitled to fee in respect of alterations within three years; nor for certificate to rules, being copies of those already enrolled. (Ib. § 5.)

The rules shall provide, that, once a-year at least, a general statement of the funds of the society shall be prepared; and every member shall be entitled to receive a copy thereof, on payment of a sum not exceeding 6d. (10 Geo. IV. c. 56, § 33.)

In order to secure data for correct calculations of tables of payments and allowances, every society established under the acts shall, within 3 months after December 1835, and again, within 3 months after the expiration of every further period of 5 years, transmit to the certifying barrister or advocate a return of the rate of sickness and mortality experienced within the before-mentioned period of 5 years, according to the form prescribed in the act. (Ib. § 34, and 4 & 5 Wm. IV. c. 40, § 6.)

The office-bearers, as provided by the rules, are authorized and required, with consent of the society, to invest the funds in real or heritable securities or property, government securities, savings banks, or the chartered banks in Scotland, and not otherwise. (10 Geo. IV. c. 56, § 13.)

Every society established under the acts is empowered to invest the whole, or any part of its funds, in savings banks instituted under 9 Geo. IV. c. 92, and that without any restriction as to amount. (4 & 5 Wm. IV. c. 40, § 9.)

A society may also lodge any sum, not being less than £50, with the Bank of England, to the account of the Commissioners for the Reduction of the National Debt, on a declaration by two or more treasurers, or trustees, that the money exclusively belongs to the society, and with the same formalities in other respects as are followed by savings banks. The interest allowed is 2½d. per cent. per diem, or £3, 16s. 0½d. per year. (10 Geo. IV. c. 56, § 31, and 9 Geo. IV. c. 92, § 16.)

If the person who, as treasurer or other officer, has any of the property of the society in his hands, die or become insolvent or bankrupt, the person having, as executor, creditor, or otherwise, access to the estate, must, within 40 days after a demand made in writing, pay whatever is due to the society in preference to other claims. (Ib. § 12.)

All the property is vested in the treasurer or trustee for the time being, without any conveyance from predecessor to successor, except a transfer in the case of public stock; and such office-bearer may sue or be sued in his capacity of office-bearer, and may bring or defend actions when sanctioned by a majority of the society. (10 Geo. IV. c. 56, § 21.)

When a member dies, entitled to a sum not exceeding £20, the office-bearer, if assured that he has left no will, and that no administration or confirmation is to be taken out, may apply the sum according to the rules; or, if there are no rules on the subject, may divide it among the persons entitled to succeed to the effects of the deceased without administration or confirmation. (Ib. § 24.)

No stamp-duty is payable in respect of the transactions, receipts, payments, or deeds of societies constituted under the acts. (Ib. § 37.)

Exemption from stamp-duties not to extend to societies in which the sum assured to an individual exceeds £200. No society, by the rules of which a sum exceeding £200 may be assured to an individual, to invest its funds in savings banks, or with the National Debt Commissioners, except so much as may be received on account of assurances made previous to the act. (3 & 4 Vict. c. 73, §§ 1, 2.)

No society, when once regularly constituted, can be dissolved before the purposes for which it was instituted have been carried into effect, without the consent of five-sixths in value of the members, and of *all* the individuals entitled to relief. (10 Geo. IV. c. 56, § 26.)

In the constitution of friendly societies, the chief difficulty will always be the adjustment of the sickness contributions and allowances; as, even supposing the general law, or average rate of sickness to be ascertained, very great care will be required in determining the modifications to which it must be subjected before being applied to particular classes of persons. Hitherto only two attempts have been made on a large scale to ascertain the average rate of sickness. The first is that of the Highland Society, already mentioned, which is founded on numerous returns by Scotch friendly societies. The second is founded on similar returns by English friendly societies made to the Society for the Diffusion of Useful Knowledge, the results of which were published in 1835 by Mr Ansell, in his "Treatise on Friendly Societies." The following shows the mean annual sickness at different ages, deduced from these returns:—

	Age, 21.		Age, 30.		Age, 40.		Age, 50.		Age, 60.		Age, 70.	
	Days.	Hours.	Days.	Hours.	Days.	Hours.	Days.	Hours.	Days.	Hours.	Days.	Hours.
Scotch societies,	4	1	4	8	5	7	9	13	16	10	74	22
English societies,	5	13	5	20	8	3	12	2	22	2	81	19

The returns to the Highland Society did not furnish data for a table of mortality, and their calculations proceeded upon an average of the Northampton, Carlisle, and latest Swedish tables. In Mr Ansell's work, however, a table is given, deduced for ages 20 to 70, from the experience of the English societies; but the imperfect nature of the materials furnished to him renders it undeserving of much confidence.

Of the modern friendly societies there is probably none deserving of higher reputation than the "Edinburgh School of Arts Friendly Society," instituted in 1828, the tables of which were framed by Mr John Lyon, the gentleman employed to digest the returns to the Highland Society, and revised by the late Mr Patrick Cockburn, an eminent accountant in Edinburgh; and the following extracts from their tables will furnish a good example of the contributions and allowances adapted to a society composed of respectable working-men in a large city. They were constructed by adding 50 per cent. to the rates of sickness exhibited by the tables of the Highland Society (as these were ascertained to be too low), by assuming the rate of mortality of these tables, and by taking the rate of interest at 4 per cent. They give entrants the option of joining sickness schemes up to the ages of 60 or 65, with annuities to commence at these ages respectively; but it may be observed that a very general preference is given by members to the former.

I. SICKNESS FUND. (*Entry Money*, 2s. 6d. *Males only admissible.*) A weekly allowance of 10s. constitutes one share, and any member may take one, one and a half, or two shares. The full allowance to be paid for 52 weeks of sickness; three-fourths for other 52 weeks; and one-half for the remainder of all temporary or permanent sickness up to the age of 60 or 65, when the annuity, or permanent provision for old age (shown in Scheme II.), is to commence.

ANNUAL CONTRIBUTIONS FOR ONE SHARE.

Age next birthday.	To cease at 60.	To cease at 65.	Age next birthday.	To cease at 60.	To cease at 65.	Age next birthday.	To cease at 60.	To cease at 65.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.		£ s. d.	£ s. d.
19	0 11 6	0 12 4	30	0 14 3	0 15 9	41	0 19 5	1 2 2
20	0 11 8½	0 12 7	31	0 14 7	0 16 2	42	1 0 1	1 2 11½
21	0 11 11	0 12 10	32	0 14 11	0 16 7½	43	1 0 9½	1 3 10
22	0 12 1½	0 13 1½	33	0 15 3½	0 17 1	44	1 1 7	1 4 9½
23	0 12 4	0 13 4½	34	0 15 8½	0 17 7½	45	1 2 4½	1 5 9
24	0 12 6½	0 13 8	35	0 16 2	0 18 1½	46	1 3 2½	1 6 9
25	0 12 9½	0 13 11½	36	0 16 7½	0 18 8½	47	1 4 0½	1 7 9½
26	0 13 0½	0 14 3½	37	0 17 1	0 19 3½	48	1 4 10½	1 8 10½
27	0 13 4	0 14 7½	38	0 17 7½	0 19 11½	49	1 5 9	1 9 11½
28	0 13 7½	0 14 11½	39	0 18 2	1 0 7½	50	1 6 7	1 11 1
29	0 13 11	0 15 4	40	0 18 9	1 1 4½			

II. **Deferred Annuity Fund.** (*Entry Money*, 2s. 6d. *Females admissible.*) An annuity of £8, payable quarterly, commencing at the age of 60 or 65, whether in sickness or in health, constitutes one share; and any member may take one, two, three, or four shares.

ANNUAL CONTRIBUTIONS FOR ONE SHARE. (*Females pay One-Fourth more.*)

Age next birthday.	To cease at 60.	To cease at 65.	Age next birthday.	To cease at 60.	To cease at 65.	Age next birthday.	To cease at 60	To cease at 65.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.		£ s. d.	£ s. d.
19	0 8 4	0 4 10½	30	0 17 5	0 9 6	41	1 19 2½	1 0 3
20	0 9 3½	0 5 2¾	31	0 18 7½	0 10 1½	42	2 2 8	1 1 10½
21	0 9 11	0 5 6¼	32	0 19 11	0 10 9¾	43	2 6 7½	1 3 8
22	0 10 6¼	0 5 10½	33	1 1 4	0 11 6¼	44	2 11 1	1 5 8
23	0 11 2¾	0 6 3	34	1 2 10¼	0 12 3½	45	2 16 2	1 7 10¼
24	0 11 10¼	0 6 7	35	1 4 7¾	0 13 2	46	3 2 0	1 10 4¾
25	0 12 8	0 7 0	36	1 6 5¼	0 14 1½	47	3 8 8½	1 13 1¾
26	0 13 5½	0 7 5	37	1 8 6	0 15 1¼	48	3 16 7	1 16 3
27	0 14 4	0 7 10¼	38	1 10 9¼	0 16 3	49	4 5 10	1 19 10
28	0 15 3¼	0 8 4½	39	1 13 3¾	0 17 5¼	50	4 16 11	2 3 11
29	0 16 3½	0 8 11	40	1 16 1	0 18 9¾			

III. **Life Assurance Fund.** (*Entry Money*, 2s. 6d. *Females admissible.*) The sum of £10 payable at death, constitutes one share; and any member may take from one to three shares.

ANNUAL CONTRIBUTIONS FOR ONE SHARE. (*Females pay One-Sixth less*).

Age next birthday.	To cease at 60.	To cease at 65.	Age next birthday.	To cease at 60.	To cease at 65.	Age next birthday.	To cease at 60.	To cease at 65.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.		£ s. d.	£ s. d.
19	0 3 4	0 3 3	30	0 4 6½	0 4 4½	41	0 7 0½	0 6 4½
20	0 3 5	0 3 4	31	0 4 9	0 4 6	42	0 7 5	0 6 8
21	0 3 6	0 3 5	32	0 4 11	0 4 8	43	0 7 9½	0 6 11½
22	0 3 7	0 3 6	33	0 5 1	0 4 9½	44	0 8 3	0 7 3
23	0 3 8½	0 3 7	34	0 5 3	0 4 11½	45	0 8 9	0 7 7½
24	0 3 9½	0 3 8	35	0 5 5½	0 5 1½	46	0 9 3½	0 7 11½
25	0 3 11	0 3 9½	36	0 5 8	0 5 3½	47	0 9 11	0 8 4½
26	0 4 0	0 3 10½	37	0 5 11	0 5 6	48	0 10 7½	0 8 10
27	0 4 1½	0 4 0	38	0 6 2	0 5 8½	49	0 11 5½	0 9 4
28	0 4 3	0 4 1	39	0 6 5½	0 5 11	50	0 12 5½	0 9 11
29	0 4 5	0 4 2½	40	0 6 9	0 6 1½			

Summary of the Rules of the Edinburgh School of Arts Friendly Society.

1. No person admitted after the age of 50.

2. Ages of applicants require to be certified by parish certificates, or, if such cannot be procured, by some other satisfactory evidence.

3. Male candidates for admission must apply personally to the committee on the first Monday evening of any month, and pay their entry-money. Any applicant who may be rejected by the committee will receive back all his payments, with the exception of 6d. for each fund for which he proposes becoming a member.

4. The benefits of each fund may be secured either by a single payment on admission, or by an annual or monthly contribution per advance, corresponding to the number of shares held, and to the age at entry; and members may also at any time reduce, or entirely redeem, their future annual or monthly contributions, by payments of not less than £1 to account.

5. Persons entering the sickness fund must take at least one share in the annuity fund.

6. Members not having at first taken the utmost extent of benefits allowed, and wishing afterwards to increase their shares, may do so upon the same conditions as new entrants.

7. Members are entitled to benefit from the sickness and life assurance funds upon the expiry of one year from their enrolment. Should any one die before that period, all payments will be returned to his representatives, with the exception of interest, fines, and entry-money. Likewise, any member leaving the country, or *unable* to continue his payments, will, on withdrawing from the society, receive a proportion of his past contributions.

8. The only other payments exigible beyond the sums specified in the tables are, 1d. per month for management on the first share in each fund, 1s. 6d. for a copy of the full set of rules, interest on arrears, and small fines for non-attendance at general meetings.

9. There is a fund distinct from those for the benefits, for defraying the expenses of management, consisting of sums received from the honorary auxiliary fund, entry-moneys, contributions for management, and payments from other sources which need not be more particularly mentioned.

10. All the operations of each of the three schemes are kept separate; the funds in possession and the value of the future contributions are balanced at the end of every five years with the value of the future allowances, and the real state of the society's affairs satisfactorily ascertained.

Benefit Building Societies are associations instituted under the act 6 & 7 Wm. IV. c. 32, for the purpose of raising, by periodical subscriptions of not more than £1 per month, shares not exceeding £150, for the purpose of enabling the holder to receive the value, and therewith erect or purchase a dwelling-house, or other real or leasehold estate, to be secured by mortgage to the society, till the amount of the share and all expenses have been paid, with interest; it being competent for such societies to receive a bonus from any member, in consideration of his receiving his share in advance, and to appoint forms of conveyance for the sale and mortgaging of the property. The regulations as to friendly societies in general, apply to benefit building societies, in so far as they may be applicable to the peculiar purposes of the latter. (Ib. § 4.)

FULLER'S EARTH, a soft, dull, greasy kind of clay, usually of a greenish-brown colour. It is found in various parts of the south of England, particularly in Surrey, near Nuthill and Ryegate. It is used in the fulling of cloth, from its property of absorbing oil and greasy matter. In Surrey, two kinds are distinguished; yellow earth, the best, employed for the finer cloths of Wiltshire and Gloucestershire; and blue earth, principally used in fulling coarser cloths in Yorkshire.

FUNDS, a term used in reference to those government obligations which constitute what is called the funded debt of the United Kingdom. The condition of mankind, in ancient times, made the decision of national contests dependent upon the numbers, courage, and military talents of the contending nations; but the great alteration in the modern state of society, and changes in the art of war, have introduced a different principle; and money is now said to supply the sinews of war, and gold rather than steel is accounted the instrument which leads to victory. In the middle ages, the general state of wealth was insufficient to furnish the means of long-continued hostilities. For those that were undertaken, supplies from the people were obtained to a certain extent, either in the shape of money or of feudal services; loans also were raised, partly compulsory, and sometimes by pledging the crown lands and jewels. But the irregular mode of borrowing in those days bore but little analogy to that which has since obtained under the name of the funding system, and supplied the expense of those extensive and lasting wars which have been waged in later times.

This system is commonly said to have originated in the 15th century in Venice, where money capital first became abundant. It was next adopted by Holland; and was introduced into England shortly after the revolution of 1688. At first the term fund meant the taxes appropriated to the discharge of the principal and interest of the loans; those who held government securities, and sold them to others, selling of course a corresponding claim upon some fund. But afterwards, and when this mode of appropriating taxes was abandoned, the meaning attached to the term was gradually changed; and instead of denoting the revenues upon the security of which the loans were advanced, it has for a long time signified the principal of the loans themselves. The term *stock* is used in the same sense, and is also applied to the sums which form the capital of the Bank of England, East India Company, and other public societies.

The fundholder or public creditor is differently situated from an ordinary creditor. He is viewed not as having lent his money, but as having invested it in the purchase of a perpetual annuity, subject to the condition that it may be redeemed on the terms stipulated at the time of granting it, whenever the state shall think fit. But, although he thus gives up the right of ever demanding repayment of the principal of his debt, he may sell to another person the annuity which he has purchased from the state; and the mode of transferring it, even in small sums, is so conveniently arranged, and the annuities or dividends are, in this country, so regularly paid, that it is always considered an eligible property.

MANNER OF CREATING LOANS.

At the first introduction of the funding system into this kingdom, the capital of the loan was fixed, and the interest, as in the case of an ordinary debt, was arranged according to the state of the money market; but about the middle of last century the practice was introduced of fixing the rate of interest or annuity, and bargaining with the contractors for a larger or smaller amount of capital stock. Thus, if it were agreed to negotiate the loan in a 3 per cent. stock, while the market rate of interest was 6 per cent., this would be effected by giving for each £100 paid £200 of 3 per cent. stock; while, again, if the market rate were 4½ per cent., this would be effected by assigning £150 of such stock.

All loans are effected under the authority of Parliament; but in practice it is usual for the Chancellor of Exchequer to arrange the terms of the loan with contractors before the act has been obtained, the negotiation being subject to the ratification of the legislature. When a new loan is made, it is thrown open to competition. "The Chancellor of Exchequer fixes upon the funds in which the loan is to be made. These are often of different kinds, and not unfrequently a *long annuity* forms part of the emolument. He then gives public intimation that he is ready on a certain day to receive offers and assign the loan to those who are willing to accept of the lowest terms. If a long annuity be a part of the proposed emolument, the other funds to be assigned to the lenders are fixed at a rate somewhat lower than the estimated value for each £100 borrowed, and the bidding is on the long annuity; the loan being granted to those who will accept of the least annuity in addition to the capital offered. If the loan be in different funds, but without an annuity, the capitals in all the funds, except one, are previously fixed, and the bidding is on that fund; the loan being granted to those who will accept of the least capital. The Chancellor of Exchequer is generally attended at the time appointed by several of the principal bankers in London, who deliver their offers, having previously made up a list of persons who are willing to share with them to a certain extent in case their offer be accepted; and the loan is assigned to the offerer who proposes the lowest terms.

"The loans are always payable by instalments at different periods of the year. But the dividends are payable on the whole from the first usual term of the funds in which the loan is made. Thus, the lender receives dividends during the whole of the first year, although he only advances the money on the days appointed for payment of the instalments; or if he advances the whole at first, he is allowed a suitable discount, and he derives part of his profit from these allowances; and, according to the terms of the loan, he is generally possessed of several interests; so much, perhaps, in a 3 per cent. fund, so much in a five per cent. fund, so much in a long annuity, and formerly so much in lottery tickets. After the loan is completed, these interests are assignable separately; but when the loan is in progress, they may be either assigned separately or together. The separate parts in this stage of the business are called *scrip*, and their united amount is called *omnium*. In order to obtain a loan, it is necessary that the value of *omnium* at the time should be above par. This difference, which often amounts to 5 per cent. or upwards, is called the *bonus* to the lenders. Instances, however, have occurred in which the price of *omnium* fell below par before the loan was completed. Lenders who do not pay their instalments at the appointed terms forfeit their subscriptions. The Bank of England not unfrequently lends its aid in advancing some of the instalments.

"The value of *scrip*, after any given number of payments have been made thereon, is computed by deducting the amount of the remaining payments from the value of the stock at the market price." (*Hamilton on the National Debt*, 2d edit. p. 244.)

PROGRESS AND PRESENT STATE OF THE NATIONAL DEBT.

The public debt of this country, which was inconsiderable at the Revolution, increased in little more than a century to an extent far beyond what was ever known in any other age or nation; indeed, far beyond what any person at its commencement, or even a long time afterwards, believed to be practicable. Down to the accession of George IV., the increase during every reign, except the pacific administration of George I., was greater than during the preceding. The increase during every war was greater than during the preceding. The increase during the latter period of every war was greater than during the early period. The increase by every national exertion has been greater than was held forth when hostilities were commenced. The part paid off during the intervals of peace has borne a small proportion to that contracted in the preceding war. No one can foresee how far this system may be carried, or in what manner it will terminate.

The following table shows the amount of the national debt at various periods since the Revolution :—

At the Revolution	1689	£664,263	Peace of Paris	1763	£139,000,000
Peace of Ryswick	1697	21,515,742	Commencement of American War	1779	129,000,000
Commencement of the War	1701	16,394,701	Peace of Versailles	1783	268,000,000
Peace of Utrecht	1714	53,681,076	Commencement of French War	1793	261,735,059
Commencement of the Spanish War	1740	46,449,568	Annual charge, £9,471,675		
Peace of Aix-la-Chapelle	1748	78,293,313	On January 5, 1816		885,186,325
Commencement of "Seven Years' War"	1756	75,000,000	On January 5, 1841		849,998,073

This table includes both the funded and unfunded portions of the debt; the latter consisting generally of Exchequer bills. [EXCHEQUER BILLS.] In the years

1816 and 1841, the constituent parts of the capital of the debt, and the annual charges thereon, were respectively as follow :—

	Capital.		Annual Charge.	
	1816.	1841.	1816.	1841.
3 per cent. stock.............................£	580,916,019	513,776,749	17,427,480	15,413,302
3½..	10,740,013	249,530,456	375,900	8,733,566
4..	75,725,504	1,615,385	3,029,020	64,615
5..	148,930,403	1,449,135	7,446,520	72,457
Perpetual annuities ....£	816,311,939	766,371,725	28,278,920	24,283,940
Terminable annuities................................	30,080,347	53,000,000	1,894,612	4,114,021
Unfunded debt not provided for..................	38,794,038	21,626,350	1,998,937	740,054
Charge for management.........................	....	....	284,673	158,363
Total unredeemed debt......£	885,186,324	840,998,075	32,457,142	29,296,378

The reduction on the capital of the debt from 1816 to 1841, it will be thus observed, is only £37,288,249, which is the excess of the sums redeemed beyond those added in that period. The former was effected, partly by the direct application of surplus revenue, and partly by converting the perpetual annuities into terminable annuities, as afterwards explained. The excess of income over expenditure from 5th January 1816 to 5th January 1837, is stated by Mr Porter (*Progress of the Nation*, sec. iv. c. 2, p. 301) to have been £46,086,321 ; but between 5th January 1837 and 5th January 1841, there has been an annual deficiency of revenue, amounting on the whole to £4,300,760, which reduces the net surplus in the 25 years from 1816 to £41,785,561. The amount redeemed by converting perpetual into terminable annuities has not been published ; but it appears, from the statements of the government actuary, that, for some years past, the annual charge on account of the latter has exceeded their equivalent perpetuities by upwards of £2,000,000. The chief additions to the debt, in the period under notice, were created by the parliamentary grant of £20,000,000, for the emancipation of the negro slaves in the colonies ;[*] and by the financial operation in the year 1822 (noticed below), for the reduction of the interest on a portion of the debt,—a measure which had the effect of adding £7,481,393 to the capital.

Greater progress, however, has been made in the reduction of the annual charge, the difference on the gross amounts in 1816 and 1841 respectively being (£32,457,142—29,296,378) £3,160,764 ; while, if the terminable annuities at both periods be converted into their equivalent perpetuities, the difference will be found to be nearly £4,500,000,[†] being a diminution of 14 per cent. This has been effected mainly by the reduction of the capital of the debt already explained, and (to the extent of £2,355,845) by the fall of the market rate of interest at different periods below the nominal rates of 4 and 5 per cent. formerly borne by different species of stock. The latter operations, which took place in 1822, 1824, 1830, and 1834, may be explained as follow :—

In 1822, the reduction in the market rate of interest caused an advance of the 5 per cent. stock to 6 or 8 per cent. above par, and advantage was taken of this circumstance to induce the holders to exchange each £100 of 5 per cents for £105 of 4 per cents. Only a very small proportion of the holders dissented from the proposal, £149,627,825 of 5 per cents being exchanged for £157,109,218 of 4 per cents; and thus while the capital of the debt was increased by £7,481,393, the annual charge was reduced by £1,197,022. In 1824, another saving of £350,597 per annum was effected, by reducing to 3½ per cent. the interest payable on £70,105,403 of 4 per cent. annuities. Again, in 1830, a saving to the extent of £755,110 was effected by transferring into a 3½ per cent. stock the 4 per cents created on the reduction of the 5 per cents in 1822; and in 1834 a further saving of £53,116 was effected by transferring the "4 per cents 1826" to a 3½ per cent. stock.

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[*] The capital created on account of this grant consisted of £5,171,624, 4s. 5d. in the 3½ per cents, procured by an arrangement (5 & 6 Wm. IV. c. 45, and 6 & 7 Wm. IV. c. 82) with the Commissioners for the Reduction of the National Debt ; and a direct loan, in 1835, of £15,000,000 (3 & 4 Wm. IV. c. 73), the consideration for which was an equivalent amount in 3 per cent. stock, namely, 75 per cent. in the 3 per cent. consols, and 25 per cent. in the 3 per cent. reduced annuities, besides a long annuity of 13s. 7d. per cent. per annum, expiring in 1860, and amounting to £101,875.

Any other loans necessary since 1815 have been usually created by the issue of Exchequer bills, which have been funded as occasion required.

[†] The annual charge in 1816 was £32,457,141 ; but if instead of the £1,894,612 of terminable annuities included therein, there be substituted their equivalent perpetuities, estimated at £830,000, the amount will be reduced to £31,392,529. Again, the annual charge in 1841 was £29,296,378, and, substituting for the £4,114,021 of terminable annuities included therein, their equivalent perpetuities, estimated at £1,750,000, the amount will be reduced to £26,932,357. The difference between the two, £4,460,172, may be viewed as the extent to which the permanent annual charge on the debt has been reduced since 1816.

On the occasion of the reduction of 1830, an option was offered to the holders of every £100 of 4 per cents to receive either £100 of 3½ per cents, or, what would produce an equal return, £70 of new 5 per cents, the government engaging not to pay off this 5 per cent. stock, or to reduce the interest upon it, until after the expiration of 45 years from its creation. But the option thus given was embraced to a very small extent, the amount of 5 per cents created having been only £474,374. Such holders of 4 per cents as refused to receive the diminished rate of 3½ per cent. were paid off at par. The amount of stock held by these dissentients, about 2½ millions, was liquidated by means of an issue of Exchequer bills.

Explanation of the different Funds or Stocks.

British Perpetual Annuities.

South Sea Stock and Annuities.—These have all, by successive parliamentary arrangements, been created out of the capital of the celebrated South Sea Company, an account of which will be found under that head. They comprise four descriptions of stock, namely:—

South Sea Stock, 1733, £3,662,784, 8s. 6¼d. This is the trading stock of the company, upon which the interest paid by the state is 3 per cent.; but an additional half per cent. is paid to the proprietors from certain fines to which the company are entitled from ships trading within the bounds of their charter, and from the allowances made for the management of this portion of the public debt. Should these fail, however, to produce the full half per cent., government is bound to supply the deficiency.

3 per cent. Old South Sea Annuities, £3,497,870, 2s. 7d. This was created a 3 per cent. fund in 1757, having previously borne interest at 5, 4, and 3½ per cent. Dividends due April 5, and October 10.

3 per cent. New South Sea Annuities, £2,460,830, 2s. 10d. In the same condition as that last mentioned. Dividends due January 5 and July 5.

3 per cent. South Sea Annuities, 1751, £523,100. This stock originated in a loan which was raised in the year just mentioned, to pay off those who dissented from a reduction of interest which was then made in the old and new annuities. Dividends due January 5 and July 5.

3 *per cent. Bank Annuities*, 1726, £825,251, 19s. This stock, originally £1,000,000, was created by a lottery to pay off certain Exchequer bills. Dividends due January 5 and July 5.

3 *per cent. Consolidated Annuities*, commonly called *Consols*, 1751, £362,542,977, 8s. 0¼d. This stock, originally only £9,137,821, derives its name from having been formed by the consolidation of several stocks which had before been kept separate. It is by far the largest of the public funds, a circumstance which, joined to the proportionally great number of its holders, renders it the most liable to be affected by those circumstances which tend to elevate or depress the price of the stocks: on this account it is preferred by speculators. Dividends due January 5 and July 5.

3 *per cent. Reduced Annuities*, 1757, £125,861,030, 7s. 10d. The name of this stock is derived from the circumstance of its interest having been reduced from a higher rate, 3½ per cent., which it bore prior to 1757. Its price is regulated by that of the preceding; being however generally about ¾ per cent. higher or lower (according to the time of year), in consequence of its dividends becoming due at different periods from those on consols. Dividends due April 5 and October 10.

3½ *per cent. Consolidated Annuities*, 1818, £10,159,721, 17s. 1d. This stock was created partly by the funding of Exchequer Bills, and partly by the conversion of certain 3 per cents—the holders of the latter purchasing the additional half per cent. by a money subscription, then given in aid of the sinking fund. In 1829, it became redeemable at par, upon six months' notice being given in the Gazette, and affixed upon the Royal Exchange, by payments of not less than £500,000 at one time. Dividends due April 5 and October 10.

3½ *per cent. Reduced Annuities*, 1825, £66,259,849, 12s. 9d. This stock was created by the conversion of the "Old Four per cents." It is now also, as well as the preceding, redeemable at par. Dividends due April 5 and October 10.

New 3½ per cent. Annuities, 1830, £145,225,865, 13s. 2d. Formed by conversion of the "New Four per cents;" to which, in 1834, was added £10,708,409 of "Four per cents, 1826." It became redeemable after 5th January 1840. Dividends due January 5 and July 5.

New 5 per cent. Annuities, 1830, £428,076, 15s. 4d. This stock originated in the same manner as the New 3½ per cents. It is not redeemable until 1875. Dividends due January 5 and July 5.

These, added to £11,015,100 of debt due to the Bank of England, bearing 3 per cent. interest, make £732,462,458, 7s. 1¾d., the unredeemed capital of the British Funded Debt, at 5th January 1841. At that date the amount of the redeemed capital standing in the name of the Commissioners for the Reduction of the National Debt, was £1,574,326, 7s. 1d., vested, almost wholly, in 3 per cent. Reduced Annuities and Consols.

The dividends are payable on the third day after they become due, but if a Sunday intervene, they are not payable until the fourth day. Those on the South Sea Stock and Annuities are payable at the South Sea House; the others at the Bank of England.

Irish Perpetual Annuities.

These consist of 3 per cent. Irish Consolidated Annuities, £3,272,607, 7s. 1d.; 3 per cent. Reduced Annuities, £115,197, 10s. 10d.; 3½ per cent. Debentures and Stock, £14,567,562, 7s. 2d.; Reduced 3½ per cent. Annuities, £926,633, 7s. 3d.; New 3½ per cent. Annuities, £12,390,823, 18s. 10d.; New 5 per cent. Annuities, £5672, 19s. Adding to which, £2,630,769, 4s. 8d. due to the Bank of Ireland, namely, £1,615,384, 12s. 4d. at 4 per cent., and £1,015,384, 12s. 4d. at 5 per cent., makes £33,909,266, 14s. 10d., the amount of the capital of the Irish Funded Debt at 5th January 1841. The dividends on the Irish Stocks are payable at the Bank of Ireland.

Terminable Annuities.

In the year 1808, the Commissioners for the Reduction of the National Debt were empowered to grant annuities for the life either of the purchaser or his nominee, upon such an amount of perpetual annuities being transferred to the Commissioners as, when calculated according to a scale varying with the fluctuating prices of the stocks, was considered equivalent to the present value of the annuity. But it is singular, that with the experience which could then have been brought to the correct elucidation of this subject, the tables adopted were incorrect to a degree which entailed a very heavy loss upon the public. In 1827, when the matter was investigated by the government actuary, the loss, through miscalculation in these tables, was proceeding at the rate of about £400,000 a-year. This blunder was pointed out to the finance minister as early as 1819, but no active steps were taken to remedy it until 1828, and even then the rates at which annuities were granted upon the lives of old persons were found to be so unprofitable to the public, that government had again, after a time, to interfere, and to limit the ages upon which they could be obtained. They are now granted under authority of the act 10 Geo. IV. c. 24, upon conditions which are explained under the head ANNUITIES;* besides which they are, by a later act, 3 Wm. IV. c. 14, granted on a modified scale through the medium of savings banks. [BANKS FOR SAVINGS.] The whole payable in 1841 were as follow:—

Life Annuities, per 48 Geo. III. c. 142, 10 Geo. IV. c. 24, and 3 Wm. IV. c. 14	£857,857
Other Life Annuities, per various acts	61,023
Annuities for a limited term of years, per 59 Geo. III. c. 34, 10 Geo. IV. c. 24, and 3 Wm. IV. c. 14	1,314,928
Dead Weight Annuity, payable to the Bank of England, per 4 Geo. IV. c. 22 [DEAD WEIGHT], expires 1867	585,740
Long Annuities, or Annuities for a term of years, expiring January 5, 1860, granted chiefly as premiums to the subscribers to loans	1,294,473
	£4,114,021

Deferred Annuities were besides outstanding to the amount of £5,908.

The life annuities are payable at the National Debt Office, Old Jewry; the others at the Bank of England.

PURCHASE AND SALE OF FUNDED STOCK.

In a general point of view, it might be supposed that the price of a certain nominal amount of stock in any particular fund would bear to its price in any other fund the same relation which subsists between the rates of interest in the two funds; and that, for example, if £100 in a 3 per cent. stock cost £90, the same amount would cost £105 in a 3½ per cent. stock, £120 in a 4 per cent. stock, and £150 in a 5 per cent. stock, as each of these investments would yield the same return of interest,—namely, £3, 6s. 8d. per cent. But there are peculiar circumstances which render this rule subject to variations. Thus, the exchangeable value of 3 per cent. stock is always greater than that of funds bearing a higher rate of interest, in consequence of the liability to which the latter are exposed of being sooner discharged at par, by means of creating other stock bearing a lower rate. Again, those funds in which, either from their small amount, or some other cause, there are comparatively few transactions, will not commonly bear so high a price as those in which more frequent operations, and consequently greater fluctuations, offer a more attractive lure to speculation. It is from this cause that the 3 per cent. Bank Annuities of 1726, the entire amount of which is only about £850,000, are generally at least 1 per cent. lower in price than the 3 per cent. consols. In other cases, however, it is difficult to account satisfactorily for the preference shown by the public for one description of stock over another.

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* By a late regulation no person can be nominated above the age of 65, unless possessing a beneficial interest in the annuity.

Investments in the funds being made with various objects, the choice of the stock must, in some respects, be regulated by the ulterior views of the purchasers. When made for temporary purposes, stocks bearing the higher rate of interest may commonly be selected without much risk of loss from such a source. The same liability of being redeemed which admits of the purchase being made at the lower rate will indeed equally exist, and affect the price whenever a sale is made; but in the interval an advantage in point of income will have been secured.

The general causes which affect the price of stocks are changes in the market-rate of interest, or in the political or financial condition of the country. "In ordinary times, the public funds, from the certainty and regularity in the payment of the dividends, and the great facility with which transfers may be made, offer as advantageous an investment as any other which is open to capitalists; and the price of stocks, accordingly, will commonly be so high as not to afford the purchaser more than the current rate of interest for money lent upon good security. The chances of fluctuation, however, will in general prevent the price from rising much beyond this point. On the other hand, it will be apt to be depressed to a lower level, not only by any actual derangement in the public finances, but also by whatever may be supposed to have ever so indirect or remote a tendency to affect the ability of the state to fulfil its pecuniary engagements. Whenever a new loan is raised, inasmuch as the burden of the debt is thereby increased, the price of stock is generally lowered for the moment. Again, it is usually lower in time of war than in time of peace; and during an unfortunate than during a successful war. It is often affected by the apparent stability of the administration, as dependent upon the issue of the party contests in parliament. Sometimes the price of the funds has been brought down by the imposition of a tax, sometimes by the repeal of one. In the former case, the delicate and apprehensive pulse of the money-market may be supposed to have been acted upon, commonly either by a dread of the public impatience under a new burden, or by the view taken of the measure as an indication of increased financial difficulties on the part of the state; in the latter, by a feeling of the security of the fundholder being in some degree diminished, in consequence of the extinction of one of the usual sources from which the dividends, together with the other expenses of the government, have been paid. But it would be scarcely possible to arrange, under any number of general heads, all 'the skyey influences' that are capable of elevating or depressing this most sensitive barometer, the nature of which is to be agitated by every breeze of popular exhilaration or nervous despondency, by every fit of suspicion or confidence, by every hope and fear, almost by every passion, imagination, and caprice of the human heart. It may be observed, however, that in the fluctuations of the funds, a fall of prices by what we may call a start or a leap, has been a much more frequent phenomenon than an equally sudden rise to any considerable extent. The depression which is at once produced by a panic is generally recovered from only by degrees." (*Companion to the Newspaper*, No. 40, p. 69.)

The manner of transferring stock is described by Dr Hamilton as follows :—

"Agreements for the sale of stock are generally made at the Stock Exchange, which is frequented by a set of middlemen called jobbers, whose business is to accommodate buyers and sellers with the exact sums they want. A jobber must be possessed of considerable property in the funds; and he declares a price, suppose 59¼ or 59⅜ in the three per cent. consols; that is, he is willing to buy any sum from any person at 59¼, or sell him at 59⅜. By this means, one who wishes to sell, suppose £375, 10s. and could hardly find a purchaser for that precise sum without the assistance of a jobber, obtains his purpose, and the smallest sums are purchased and sold with the utmost facility. The jobber's profit is generally ⅛ per cent., for which he transacts both a sale and a purchase; and these persons often engage in no other stock speculation, but go away when the business of the day is over, possessed of the exact sum of stock they had in the morning.

"The bargain being agreed on, is carried into execution at the Transfer Office, at the Bank, or at the South Sea House. For this purpose the seller makes out a note in writing, which contains the name and designation of the seller and purchaser, and the sum and description of the stock to be transferred. He delivers this to the proper clerk, and then fills up a receipt, a printed form of which, with blanks, is obtained at the office. The clerk, in the meantime, examines the seller's account, and if he find him possessed of the stock proposed to be sold, he makes out the transfer. This is signed in the book by the seller, who delivers the receipt to the clerk; and upon the purchaser's signing his acceptance in the book, the clerk signs the receipt as witness. It is then delivered to the purchaser upon payment of the money, and thus the business is completed.

"This business is generally transacted by brokers, who derive their authority from their employers by powers of attorney. Forms of these are obtained at the respective offices. Some authorize the broker to sell, others to accept a purchase, and others to receive the dividends. Some comprehend all these objects, and the two last are generally united. Powers of attorney authorizing to sell, must be deposited in the proper office for examination one day before selling. A stockholder acting personally after granting a letter of attorney, revokes it by implication.

"The person in whose name the stock is invested when the books are shut, previous to the payment of the dividends, receives the dividend for the half-year preceding; and, therefore, a purchaser, during the currency of the half-year, has the benefit of the interest on the stock he buys, from the last term of payment to the day of transfer. The price of stock, therefore, rises gradually, *cæteris paribus*, from term to term; and when the dividend is paid, it undergoes a fall equal thereto. Thus the 3 per cent. consols should be higher than the 3 per cent. reduced, by ¾ per cent. from 5th April to 5th July, and from 10th October to 5th January; and should be as much lower from 5th January to 5th March, and from 5th July to 10th October; and this is nearly the case. Accidental circumstances may occasion a slight deviation.

"The dividends on the different stocks being payable at different terms, it is in the power of the stockholders to invest their property in such a manner as to draw their income quarterly.

"The business of speculating in the stocks is founded on the variation of the price of stock, which it probably tends, in some measure, to support. It consists in buying or selling stock, according to the views entertained by those engaged in this business of the probability of the value rising or falling.

"This business is partly conducted by persons who have property in the funds. But a practice also prevails among those who have no such property of contracting for the sale of stock, on a future day at a price now agreed on. For example, A may agree to sell B £10,000 of three per cent. stock, to be transferred in twenty days, for £6000. A has, in fact, no such stock; but, if the price on the day appointed for the transfer be only 58, he may purchase as much as will enable him to fulfil his bargain for £5800, and thus gain £200 by the transaction. On the other hand, if the price of that stock should rise to 62, he will lose £200. The business is generally settled without any actual purchase of stock or transfer, by A paying to B, or receiving from him, the difference between the price of stock on the day of settlement and the price agreed on.

"This practice, which amounts to nothing else than a wager concerning the price of stock, is not sanctioned by law, yet it is carried on to a great extent; and as neither party can be compelled by law to implement these bargains, their sense of honour and the disgrace attending a breach of contract, are the principles by which the business is supported. In the language of the Stock Exchange, the buyer is called a *Bull*, and the seller a *Bear*, and the person who refuses to pay his loss is called a *Lame Duck*; and the names of these defaulters are exhibited in the hall of the Stock Exchange, where they dare not appear afterwards.

"The most usual times for which bargains of this sort are made, are the first transfer days in February, May, August, and November. These are called *rencontre*, or settling days. Sometimes instead of paying the difference on the rencontre-days, the settlement is deferred to a future day on such terms as the parties agree on. This is called a *continuation*." (*Hamilton on the National Debt*, p. 248.)

Transfer Regulations.

Bank of England.

	Transfer Days.	Dividend Due.
New 5 per Cent.	Tu. W. Fri.	Jan. 5 and July 5.
New 3½ per Cent.	Tu. W. Th. Fr.	
3 per Cent. Consols	Tu. W. Th. Fr.	
3 per Cent. 1726	Tu. Th.	
Anns. for Terms of Yrs.	Mon. W. Fr.	
Bank Stock	Tues. Th. Fr.	April 5 and Oct. 10.
3½ per Ct. Consols, 1818	Tues. Th. Fr.	
3½ per Cent. Reduced	Tu. W. Th. Fr.	
3 per Cent. Reduced	Tu. W. Th Fr.	
Long Annuities	Mon. W. Sat.	
Anns. for Terms of Yrs.	Tues. Th.	
South Sea House.		
South Sea Stock	Mond. W. Fri.	Jan. 5 and July 5.
3 per Ct. New S. S. An.	Tues. Th. Sat.	
3 per Cent. 1751	Tues. Th. Sat.	
3 per Ct. Old S. S. Anns.	Mon. W. Fr.	April 5 and Oct. 10

The rate of brokerage is 2s. 6d. on the £100 upon the stock transferred. There is no stamp-duty upon transfers of government stock; but the transfer of South Sea stock under £100 is 9s. 6d., above it, 12s.

The books at the transfer offices are always shut for about six weeks previous to the days of payment, during which period no transfers can be regularly made.

The expense of a power of attorney is £1, 1s. 6d. for each government stock, and for South Sea stock, £1, 11s. 6d.

Tickets for preparing transfers must be deposited in the respective offices before one o'clock, otherwise a fee of 2s. 6d. is demanded for each; on the payment of this fee, however, transfers may be made on any day of the week up to 3 o'clock at the Bank, and half-past 2 o'clock at the South Sea House, provided the books are not shut for the dividend. Transfers forwarded in the usual manner, without fee, are made void if not executed by half-past 2 o'clock. These regulations apply both to the Bank and South Sea House.

The following tables will serve to facilitate computations respecting the value of the different stocks,—the first by showing the portion of accruing interest or dividend necessary to be deducted from their price as usually quoted in the market, before comparing them with each other,—the second by showing their proportional amount in reference to the same yearly return of interest. The use of these tables has been extended, it will be observed, to other descriptions of stock besides those of the government.

TABLE showing the Amount of Dividend which has accrued upon various Stocks on the first Day of each Month.

	Dividends due Jan. 5 & July 5.									Dividends due April 5 & Oct. 10.								
	Consols 3 per cents.			New 3½ per cent.			E. I. Stock. 10½ per cent.			Reduced 3 per cents.			Reduced 3½ per cents.			B. of E. Stock 7 per cent.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
January	1	9	4	1	14	3	5	2	9	0	14	1	0	16	5	1	12	10
February	0	4	6	0	5	3	0	15	8	0	19	4	1	2	7	2	5	2
March	0	9	1	0	10	8	1	11	11	1	4	1	1	8	1	2	16	2
April	0	14	3	0	16	8	2	9	11	1	9	4	1	14	3	3	8	6
May	0	19	3	1	2	5	3	7	4	0	4	2	0	4	10	0	9	8
June	1	4	4	1	8	5	4	5	3	0	9	1	0	10	7	1	1	2
July	1	9	4	1	14	3	5	2	8	0	13	10	0	16	2	1	12	4
August	0	4	5	0	5	2	0	15	5	0	18	10	1	1	11	2	3	10
September	0	9	5	0	11	0	1	13	1	1	3	9	1	7	9	2	15	6
October	0	14	4	0	16	9	2	10	3	1	8	7	1	13	4	3	6	8
November	0	19	5	1	2	8	3	7	11	0	3	9	0	4	4	0	8	8
December	1	4	4	1	8	4	4	5	0	0	8	10	0	10	3	1	0	6

TABLE showing the Prices which Stocks, yielding different Rates of Dividend, should respectively bear, in order to produce the same Return of Interest; also the corresponding Number of Years' Purchase for Perpetual Annuities.

Years' Purchase.	Interest Yearly.			3 per cent.	3½ per cent.	4 per cent.	4½ per cent.	5 per cent.	5½ per cent.	6 per cent.	6½ per cent.	7 per cent.	7½ per cent.	8 per cent.	10½ p. cent.
	£	s.	d.												
33⅓	3	0	0	100	116⅔	133⅓	150	166⅔	183⅓	200	216⅔	233⅓	250	266⅔	350
33	3	0	7	99	115½	132	148½	165	181½	198	214½	231	247½	264	346½
32½	3	1	6	97½	113¾	130	146¼	162½	178¾	195	211¼	227½	243¾	260	341¼
32	3	2	6	96	112	128	144	160	176	192	208	224	240	256	336
31½	3	3	6	94½	110¼	126	141¾	157½	173¼	189	204¾	220½	236¼	252	330¾
31	3	4	6	93	108½	124	139½	155	170½	186	201½	217	232½	248	325½
30½	3	5	7	91½	106¾	122	137¼	152½	167¾	183	198¼	213½	228¾	244	320¼
30	3	6	8	90	105	120	135	150	165	180	195	210	225	240	315
29½	3	7	10	88½	103¼	118	132¾	147½	162¼	177	191¾	206½	221¼	236	309¾
29	3	9	0	87	101½	116	130½	145	159½	174	188½	203	217½	232	304½
28½	3	10	2	85½	99¾	114	128¼	142½	156¾	171	185¼	199½	213¾	228	299¼
28	3	11	5	84	98	112	126	140	154	168	182	196	210	224	294
27½	3	12	9	82½	96¼	110	123¾	137½	151¼	165	178¾	192½	206¼	220	288¾
27	3	14	1	81	94½	108	121½	135	148½	162	175½	189	202½	216	283½
26½	3	15	6	79½	92¾	106	119¼	132½	145¾	159	172¼	185½	198¾	212	278¼
26	3	16	11	78	91	104	117	130	143	156	169	182	195	208	273
25½	3	18	5	76½	89¼	102	114¾	127½	140¼	153	165¾	178½	191¼	204	267¾
25	4	0	0	75	87½	100	112½	125	137½	150	162½	175	187½	200	262½
24½	4	1	7	73½	85¾	98	110¼	122½	134¾	147	159¼	171½	183¾	196	257¼
24	4	3	4	72	84	96	108	120	132	144	156	168	180	192	252
23½	4	5	1	70½	82¼	94	105¾	117½	129¼	141	152¾	164½	176¼	188	246¾
23	4	6	11	69	80½	92	103½	115	126½	138	149½	161	172½	184	241½
22½	4	8	11	67½	78¾	90	101¼	112½	123¾	135	146¼	157½	168¾	180	236¼
22	4	10	11	66	77	88	99	110	121	132	143	154	165	176	231
21½	4	13	0	64½	75¼	86	96¾	107½	118¼	129	139¾	150½	161¼	172	225¾
21	4	15	3	63	73½	84	94½	105	115½	126	136½	147	157½	168	220½
20½	4	17	7	61½	71¾	82	92¼	102½	112¾	123	133¼	143½	153¾	164	215¼
20	5	0	0	60	70	80	90	100	110	120	130	140	150	160	210
19	5	5	3	57	66½	76	85½	95	104½	114	123½	133	142½	152	199½
18	5	11	1	54	63	72	81	90	99	108	117	126	135	144	189
17	5	17	8	51	59½	68	76½	85	93½	102	110½	119	127½	136	178½
16⅔	6	0	0	50	58⅓	66⅔	75	83⅓	91⅔	100	108⅓	116⅔	125	133⅓	175
16	6	5	0	48	56	64	72	80	88	96	104	112	120	128	168
15	6	13	4	45	52½	60	67½	75	82½	90	97½	105	112½	120	157½
13⅓	7	10	0	40	46⅔	53⅓	60	66⅔	73⅓	80	86⅔	93⅓	100	106⅔	140
12½	8	0	0	37½	43¾	50	56¼	62½	68¾	75	81¼	87½	93¾	100	131¼
12	8	6	8	36	42	48	54	60	66	72	78	84	90	96	126
10	10	0	0	30	35	40	45	50	55	60	65	70	75	80	105

The highest price of 3 per cent. stock was in 1737, when it reached 107, the lowest in September 1797, when, owing to the mutiny in the fleet, the failure of an attempt to negotiate with the French Republic, and other circumstances, it fell to 47½. Since 1820, it has been rarely above 93 or below 75.

PLANS FOR THE REDUCTION OF THE PUBLIC DEBT, &C.

1. A scheme for the gradual extinction of the National Debt, by the establishment of a sinking fund, was projected, but only partially applied, by Sir Robert Walpole in 1716 (3 Geo. I. c. 27). It served, however, in some respects, as the model of the plan of the celebrated sinking fund, suggested by Dr Price, and brought forward by Mr Pitt in March 1786 (26 Geo. III. c. 31), according to which it was proposed to raise and apply (through the medium of certain commissioners) one million sterling per annum, regularly and progressively to the purchase of stock, the interest accruing thereon being applied in like manner, so that the whole would operate in a progressive accelerated ratio at compound interest. Other sums were rendered accessory to the scheme, and at the expiry of 28 years it was calculated that the fund would include a yearly income of four millions, a part of which might then be applied towards the relief of the public. Had this sinking fund been always confined to the legitimate end first proposed, there could not have been any doubt with regard to its benefits. But its operation was continued and enlarged after the commencement of the war of 1793, during periods when no surplus revenue existed, and when the sums devoted to it had to be borrowed for the purpose at a high rate of interest. In this way every addition to the sinking fund was cancelled by a corresponding addition to the debt, and the burden of an expensive establishment of officers and clerks was maintained for no beneficial purpose imaginable. This, however, was the least part of the evil. It is well known that the price of the public stocks has a tendency to fall at the period of every new creation of debt, and that the degree of such fall is influenced by the amount of new stock which it is desired to create; while at intervening periods the tendency is of an opposite character, so that the redemption of any portion of debt will not be effected on terms so low as the minister has accepted at the period of its creation. "The average rate," says Mr Porter, "at which 3 per cent. stock was created between 1793 and 1801, was £57, 7s. 6d. of money for £100 stock, and the average market-price during that period was £61, 17s. 6d. for £100 stock. The loss to the public upon the additional sum borrowed, in order that it might be redeemed during that period, which was £49,655,531, amounted to 4½ per cent., or £2,234,500. Between 1803 and the termination of the war, the average price at which loans were contracted was £60, 7s. 6d. per £100 stock, and the average market price during that time was £62, 17s. 6d. per £100. The loss was therefore 2½ per cent. upon the sum redeemed during that time, £176,173,240, or £4,404,331, making together an amount of £6,638,831 absolutely lost to the public by these operations. This amount, reckoned at the average price of the various loans, is equivalent to a capital of more than eleven millions of 3 per cent. stock, with which the country is now additionally burdened through the measure of borrowing in a depressed market more money than was wanted, in order to its being repaid when the market for public securities was certain to be higher." (*Progress of the Nation*, sec. 4, c. 2, p. 292.)

The fallacy of borrowing larger sums than were wanted, and paying in consequence more dearly for the loan of what was actually required, in order to accumulate the surplus into a fund for buying up the debt at a higher price than that at which it was contracted, appears now sufficiently obvious. The Sinking Fund Scheme, however, was presented in such a flattering point of view, that it long deluded the public, and the prospect which it enabled the minister to hold out of the speedy redemption of the debt, had the effect of reconciling the people to the imposition of a higher amount of taxes than they would otherwise have borne. Its absurdity was first satisfactorily exposed in 1812 by Dr Hamilton, who proved that "the excess of revenue above expenditure is the only real sinking fund by which public debt can be discharged. The increase of the revenue, and the diminution of expense, are the only means by which this sinking fund can be enlarged, and its operations rendered more effectual: and all schemes for discharging the national debt, by sinking funds operating by compound interest, or in any other manner, unless so far as they are founded upon this principle, are illusory."

Dr Hamilton's exposition was not immediately successful; for although, on the return of peace in 1815, it was found impossible, exhausted as the nation then was by the stupendous efforts it had made during the war, to continue the collection of the taxes required for maintaining the integrity of the sinking fund, yet for some years a semblance of this was kept up by means of various expedients, and it was not until the passing of the act 10 Geo. IV. c. 27, that the system was entirely abandoned. By that act it was provided, that, from the 5th of July 1829, there shall be issued out of the consolidated fund only such annual sum as shall appear to be the actual surplus revenue of the United Kingdom, to be applied towards the reduction of the national debt, by the commissioners appointed for that purpose; namely, the Speaker of the House of Commons, the Chancellor of Exchequer, the Master of the Rolls, the Accountant-general of the Court of Chancery, and the Governor and Deputy-governor of the Bank of England, for the time being; and that the Lords of the Treasury shall, every quarter, make up accounts of the annual revenue for the four preceding quarters, and one-fourth of the annual surplus to be issued to the said commissioners, who are to publish, in the London Gazette, the sum which will be so applicable in the ensuing quarter. It was also provided that all stock and annuities standing in their names on 5th July 1829 should be cancelled, and the dividends cease to be paid; and that in future all stock purchased by them should be cancelled from the day of transfer.

2. The conversion of the perpetual annuities payable on the capital of the funded debt into annuities payable only for a limited term of years, already explained, operates indirectly as a sinking fund; and so long as it proceeds upon equitable principles, and as the increased annual charge which it occasions is defrayed from a *bona fide* revenue, and is not carried so far as to interfere with the onward progress of the country through excessive taxation, it appears to be liable to little objection. A considerable relief may be expected from this mode of redemption in the course of the next twenty years, particularly after 1860, when the long annuities expire.

It is objected by some that the principle of this system is subversive of the spirit of accumulation, by encouraging individuals to consume their whole property during their lifetime, and as such, improper for the adoption of government, whose object ought rather to be to diffuse a spirit of forethought, and induce people to live for others as well as themselves. But the terms upon which annuities are now granted by government are not such as to give an increased stimulus to this method of investment. Annuities are, and have always been, granted by respectable insurance companies, and in every large community there must be numerous persons to whom the conversion of their capital into an annuity is a matter less of choice than of necessity.

3. Loans during war, it is now said, should be funded in stock bearing a rate of interest equivalent to the market-rate when they were contracted for, rather than in stock bearing a low rate of interest with a corresponding increase of capital, in order that advantage may be taken of the fall of interest at the return of peace. This opinion was advocated by Dr Price and Dr Hamilton; and since we experienced the beneficial effects of the late reductions of interest, it has been again brought forward by the Edinburgh Review (No. xciii., Jan. 1828), by Mr M'Culloch in his "Statistics of the British Empire" and other writings, and by Mr Porter in his "Progress of the Nation." In the last-mentioned work (sec. 4, c. 2, p. 294) it is shown that if at the expense of a small present sacrifice of ½ per cent. interest, the loans during the last wars had been contracted in 5 per cent. annuities, and if government had so far taken advantage of the subsequent lowering of the rate of interest as to procure their conversion into annuities of 3½ per cent., the unredeemed debt at the present time would, in all probability, not have exceeded six hundred millions, while the annual charge upon the same would have been twenty-one millions.

Many of the loans during the last war were raised in a very improvident manner, and there can be little doubt that had the object above contended for been kept more steadily in view by the government, our present burdens would have been less; but whether to the extent supposed by Mr Porter, it is not now necessary to inquire. It would appear, however, that the comparative eligibility of funding in a stock bearing a high or low rate of interest must depend in a considerable degree on their prices in the market. "At all times," says Mr Ricardo, "the 5 per cents bear a very low relative price to the 3 per cents. Here, then, is one disadvantage to be put against another, and it must depend upon the degree in which the prices of the 3 per cents and 5 per cents differ, whether it be more desirable to raise the loan in the one or in the other. We have little doubt, that during many periods of the war there would have been a decided disadvantage in making the loan in 5 per cent. stock in preference to 3 per cent. stock. The market in 5 per cent. stock, too, is limited; a sale cannot be forced in it without causing a considerable fall,—a circumstance known to the contractors, and against which they would naturally take some security in the price which they bid for a large loan if in that stock." (*Ency. Brit.*, art. *Funding System*, vol. x. p. 253.)

The question as to the best method of funding, therefore, is one, the solution of which must depend in a great measure on the state of circumstances at the time a loan becomes necessary. Meanwhile, it is satisfactory to reflect that the public mind is now too much enlightened on the subject of finance to permit any further imposition with respect to schemes that can be brought to the test of arithmetical calculation; and that although there is but little prospect of any important reduction in the absolute amount of our public debt, yet that its relative burden will become gradually but effectually lightened through the advancing wealth of the country. [REVENUE AND EXPENDITURE.]

FURLONG, an English measure of length, equal 660 feet, or one-eighth of a mile.

FURS, OR PELTRIES. The term *peltry* is applied by traders to the raw skin; and *fur* to the skin after the inner side is converted into a kind of leather. The use of furs originated in those regions of the N. of Europe and Asia where they most abound, and where the severity of the climate renders that species of clothing necessary. They were unknown to the ancient Greeks and Romans, and were probably introduced into civilized Europe by the northern conquerors. In the 12th, 13th, and 14th centuries, furs, especially those of the sable and ermine, formed part of the fashionable magnificence of courts. At that time they were chiefly procured from the north of Asia by the traders of Italy, by whom they were distributed throughout France, England, and other countries. Since the discovery and settlement of Canada, however, they have been mostly obtained from the northern parts of America; and there is not perhaps a single article of commerce which has called forth a more daring and adventurous spirit, or given rise to a more courageous endurance of dangers and privations, than have been manifested throughout the prosecution of the trade in those bleak and savage regions.

The fur-trade was brought into repute by the French soon after their settlement in Canada in 1608, and their success encouraged the formation of the English Hudson's Bay Company, which was chartered by Charles II. in 1670, with the exclusive privilege of trading with the Indians in the vast territories adjoining the inlet from which the corporation takes its name. But their charter never having been confirmed by Parliament, hunting in those regions was still considered to be open to all British subjects, and not a few engaged in it. This irregular trade was suspended after the expulsion of the French from Canada in 1759, but it soon afterwards revived and increased. In 1766, private adventurers began to traffic from Michillimakinac, whose success incited others to follow their example; and independent traders gradually spread over every part of the country, until 1787, when these scattered parties were united into one great body, under the name of the "North-West Company." The rivalry of this association had the effect of inspiriting and extending the trade, but it was carried on by them in many respects beyond legitimate limits, and often accompanied by open violence and bloodshed, in which both Europeans and natives were alike sufferers. Never indeed was a more furious contest waged between two mercantile bodies than between the North-West and Hudson's Bay Companies. At length, in 1821, the two concerns were united, under the firm of the "Hudson's Bay Fur Company," with much advantage to the peace of the fur countries, and perhaps to the permanent interests of the trade. The skins collected by this Company are all shipped to London, mostly from their factories of York Fort and Moose Fort in Hudson's Bay; others from Fort Vancouver, on the Columbia, on the N. W. coast, and from Montreal. This last, which was the principal seat of the North-West Company, has, since the union, sunk into a subordinate station.

On the part of the United States, the fur-trade is chiefly prosecuted by the "North American Fur Company," whose principal establishment is at Michillimakinac, where it receives skins from the post depending on that station, and from those on the Mississippi, Missouri, and Yellowstone rivers, and the great range of country extending thence to the Rocky Mountains. This Company penetrates into the bosom of these distant regions by means of steam-boats. Of other associations in the United States, the most celebrated are Ashley's Company from St Louis, and Captain Bonneville's, formed at New York in 1831; which last has pushed its enterprises into tracts between the Rocky Mountains and the coasts of Monterrey and Upper California. Indeed the whole of the districts from the Mississippi to the Pacific, and from the Arctic Sea to the Gulf of Mexico, are now traversed in every direction by the hunter. Almost all the American furs which do not belong to the Hudson's Bay Company find their way to New York, where they are either distributed for home consumption or exported chiefly to London.

The fur-trade is also extensively pursued by the Russians in the N. of Asia and the N. W. coast of America. Their chief association is the Russian American Company of Moscow; and the principal markets for their furs are the fairs of Kiachta, Novgorod, and Leipsic.

Furs may be divided into two distinct classes; those employed for clothing or ornamental purposes, and those used in felting or hat-making. Of the former, the principal are the gray, silver, and black fox, the ermine, sable, chinchilla, fitchet, bear, martin, mink, lynx, and wolf; of the latter, the beaver, nutria, otter, hare, rabbit, and racoon; but several of the skins used for felting purposes are manufactured for dress. Furs, and especially those used for felting, are further distinguished into *seasoned* and *unseasoned* skins; the former being those which are taken off the animal in winter when the fur is at its full growth, and in the highest state of perfection as to fineness; the latter, those obtained in spring, summer, and autumn, when it is short, coarse, and hairy, and generally not worth more than a third of the value of that found on the best seasoned skins.

The more valuable and scarce furs are chiefly procured in Asiatic Russia. The "precious ermine" and sable, both of the genus *mustela* (weasel), are obtained of the best quality only in the cold regions of that country and the N. of Europe. The snowy whiteness of the former, and the rich dark shades of the latter, with the great depth, and the peculiar, almost flowing softness of their skins and fur, have combined to give them a preference in all ages and countries, and they still maintain the same relative estimate in regard to other furs, as when they marked the rank of the crusader, and were emblazoned in heraldry. The martin resembles the sable; the best are from Kamtschatka and N. Asia, but in every pack of American skins, some are to be found of a beautiful shade, and a deep rich olive colour. Next to these in value are the sea-otter, the mink, and the fiery fox. The sea-otter, procured in Behring's Island, Kamtschatka, and opposite coasts of America, is an exceedingly fine, soft, close fur, jet black in winter, with a silken gloss; the fur of the young animal being, however, of a beautiful brown colour. The sea-otter is confined to the N. W. coast of America, and the number is now so much reduced as to render the chase an object of little consequence. The land-otter abounds on the borders of all the interior lakes of that country; but its skin, chiefly used for collars and linings, is comparatively of small value. The mink is a diminutive species of otter. The fiery fox, the bright red of Asia, more brilliantly coloured and finer than any other of the genus, is highly esteemed, and is the standard of value on the north-eastern coast of that quarter of the world. Of the American fox there are many varieties, as the black, red, gray, white, cross, silver, and dun coloured. The silver fox is a rare animal, a native of the woody district below the falls of the Columbia river. Bear skins of various kinds and colours are procured in N. America, and are much used in the northern countries of Europe both for warmth and ornament, particularly on the outside of carriages. The hide of the wolf is considered peculiarly fitted for knapsacks and similar purposes, for which it is much employed in Germany.

The beaver's fur is an article of great importance, owing to its abundance (though this is now much less than formerly) and the large and sure demand for it in the hat manufacture. It appears to be indigenous in all the northern parts of America, though in the settled countries and in even those open to private hunters, it is now nearly exterminated. The skins are divided into *parchment*, or those of the old animals, and *cub*, or those of the young ones. The latter are the finest, but from their smaller size are not of equal value with the others, and they have become comparatively rare, as the capture of the young animals is now prohibited by the Company. The musquash, a species of diminutive beaver, is found principally in the vicinity of Hudson's Bay, and the vast number taken renders its skin an article of importance; the fur is used in the manufacture of inferior hats. Nutria skins have become of considerable importance only within the last twenty years; they are imported from S. America, principally from La Plata. Of the other foreign furs it is unnecessary to speak, as a description of all those of much interest will be found under their respective heads. The only British ones that need be noticed are those of the rabbit and the hare, which are both extensively used for felting; the hair of the silver-tipped rabbit of Lincolnshire, however, is highly esteemed for dress,—a purpose for which it is exported both to Russia and China.

Furs are not only used and valued in those countries where they are needed for defence against the severity of the seasons, but also among the inhabitants of milder climates, who, being of Tartar or Sclavonian descent, are said to inherit an attachment to that species of clothing. Such are the inhabitants of Poland, Southern

Russia, China, Persia, Turkey, and many of the nations of the middle and western parts of Europe. In Syria, Egypt, Bucharia, and Independent Tartary, there is also a great consumption where there exists no physical necessity.

The principal emporium of the fur-trade is London, where the vessels of the Hudson's Bay Company arrive about the end of September; and the public sales afterwards held by them are attended by many foreign merchants, whose purchases are chiefly sent to the great fairs of Leipsic, whence they are distributed through various parts of the Continent. The following is an account of the furs exposed for sale by the Company in December of the three years 1835, 1836, and 1837:—

Skins of	1835.	1836.	1837.	*Skins of*	1835.	1836.	1837.
Beaver..........	78,908	46,063	82,927	Fisher..........	2,479	1,327	6,115
Martin..........	61,005	52,749	156,168	Lynx..........	6,990	3,762	31,887
Otter..........	15,487	8,432	15,934	Mink..........	17,809	12,228	27,750
Fox, Silver and Cross..........	910	471	2,147	Wolf..........	3,722	307	7,031
				Wolverene.......	1,263	143	2,166
Other Foxes.....	8,704	1,924	22,861	Badger..........	698	201	754
Musquash........	1,111,646	160,996	838,549	Swan..........	4,703	12	6,600
Bear..........	4,127	1,715	7,563	Racoon..........	522	99	585

The value of furs, especially of those which are articles of luxury and fashion, varies in an extraordinary manner, in consequence of the great inequality of the supply and the demand; and the fluctuations in price in the course of a single year often exceed 300 per cent. The following has been obligingly furnished to the publishers of this work by the Hudson's Bay Company, as the average prices of each description in the sales of 1836, which are considered as affording a good general idea of the course of the trade:—

	£	s.	d.		£	s.	d.		£	s.	d.
Beaver, parchment, per skin..........	1	12	6	Fox, Silver..........	10	0	0	Fisher..........	0	14	9
.... Cub..........	0	12	3	.... Cross..........	1	12	6	Lynx..........	1	0	0
.... Coat, per lb......	0	12	0	.... Red..........	0	10	0	Mink..........	0	2	6
Martin, per skin.......	0	15	6	.... White..........	0	9	0	Wolf..........	0	6	4
Otter, Sea..........	9	10	0	.... Kit..........	0	3	0	Wolverene..........	0	5	9
.... Land..........	1	3	6	Musquash..........	0	0	6	Swan..........	0	6	6
				Bear..........	0	18	6	Racoon..........	0	2	9

The following is an account of the chief imports of fur into the United Kingdom in 1839:—

	British America.	United States.	La Plata States.	North of Europe.
Bear..........No.	4,313	4,809	....	196
Beaver..........	57,827	10,876	....	96
Fitch..........	....	....	....	102,451
Martin..........	74,046	26,721	....	127,317
Mink..........	26,956	82,211	....	3,659
Musquash..........	594,994	211,156	....	6,554
Nutria..........	....	....	214,324	200
Otter..........	14,898	371	....	865

FUSTIAN, a coarse thick cotton stuff, generally tweeled, and of a dark colour. The most common kind is named pillow; but the fabrics called barragan, corduroy, velveret, velveteen, beaverteen, and thickset, are also fustians. These cloths are made in Lancashire and Yorkshire.

FUSTIC (Fr. *Bois Jaune*. Ger. *Gelbholz*. Sp. *Palo del Brasilamarillo*), a dye-wood, the produce of a large tree, a species of mulberry (*Morus tinctoria*), a native of tropical America and the West Indies; the best being that of Cuba. It is of a sulphur colour with orange veins, hard and strong, and is imported in the form of logs or large blocks. The yellow dye which it affords, though extremely durable when in combination with an aluminous base, yet, being dull and muddy, is chiefly employed in compound colours. About 10,000 tons of the timber are annually imported, of which upwards of four-fifths are entered for home consumption. Nearly one-half of the importations are from Colombia; the remainder chiefly from Jamaica, Cuba, and the United States.

Zante Fustic, or *Fustet*, vulgarly called *young fustic*, in distinction from the preceding, which is sometimes termed *old fustic*, is the produce of the Venetian sumach (*Rhus cotinus*), a shrub growing principally in Italy, the S. of France, and Greece. Both the root and the stem afford a fugitive yellow colour; but it is seldom used alone, being chiefly employed as an accessory to heighten cochineal and other dyes, and to give them a yellowish tinge. This wood is imported in small quantities from Patras in the Morea, the Ionian Islands, and other places.

G.

GALANGAL (Fr. *Galanga*. Ger. *Galgant*), a brown tuberose root, with a faint aromatic smell and pungent taste, like a mixture of pepper and ginger. There are two kinds, galangal major (*Alpinia Galanga*) and galangal minor, of which the latter is the strongest in all its qualities, and by far the more valuable. It may be distinguished by its colour on the outside being browner, and in the inside reddish, whilst the greater root is brownish on the outside, of a dirty white within, and covered with rings about one-fourth of an inch distant. They are produced in China, Sumatra, and Java, and used in medicine.

GALBANUM (Arab. *Barzud*. Fr. *Galbanum*. Ger. *Mutterharz*. Pers. *Beersud*), a medicinal gum-resin, produced by a perennial plant (*Bubon-Galbanum*) indigenous to Africa. It has a peculiar strong odour, not unlike that of turpentine, and a nauseous bitter taste. Sp. gr. 1·212. The best occurs in pale-coloured pieces about the size of a hazel-nut, composed of clear white tears. A more common kind is in agglutinated masses, consisting of yellowish or reddish and clear white tears, mixed with seeds and leaves. When blackish, of a weak smell, soft, and mixed with sand and other impurities, it is bad. It is exported from Syria, the Levant, and the Cape of Good Hope.

GALENA (Fr. *Plomb sulfuré*. Ger. *Bleiglanz*), or *lead-glance*, is a native sulphuret of lead, found at Leadhills in Lanarkshire, and other places. It is the richest ore of that metal, and nearly all the lead of commerce is obtained from galena. It usually occurs in heavy, shining, black, or blueish lead-coloured cubical masses. It is used in the form of powder, called *Alquifoux*, for glazing pottery.

GALLEON, a name formerly given to the vessels of war used by the Spaniards and Portuguese, and in later times to those large ships in which the former transported treasure from their American colonies.

GALLEY, a long, narrow, flat-built vessel, with one deck, propelled by sails and oars, which was much used, especially by the Italians, until of late years, when it was superseded by the steam-boat. It carried two masts with lateen sails, and, drawing but little water, was well adapted for coast navigation; while, by means of its oars, it had an advantage over sailing vessels in the dead calms so frequent in the Mediterranean.

GALLIC ACID, discovered by Scheele in 1786, exists in most astringent vegetables, and especially in gall-nuts. Its constituents are carbon, oxygen, and hydrogen. It is a solid, in taste slightly sour and astringent, inodorous, crystallizing in white silky needles. In boiling water it is freely soluble, but it requires 100 parts of cold water for solution; it dissolves also in ether and alcohol. In the form of tincture of galls it is much employed as a chemical reagent. With bases it combines to form salts, called *gallates*.

GALLIOT, a name given to a Dutch vessel, of which the bow and stern are similar, round, and bluff, and the bottom flat, so as to draw little water; and having on each side, suspended by an iron bolt, a flat piece of wood, called a lee-board, which, when required, is let down on the lee-side of the vessel, to prevent her drifting so fast to leeward as she would otherwise do. The galliot has two masts; the foremast, the tallest, is rigged as a sloop; while the aftermast carries a small sail termed the mizzen. This vessel is chiefly adapted for the shallows off the coast of Holland.

GALLON, the unit of the imperial measures of capacity, contains 10 lbs. avoirdupois, or 277·274 cubic inches of distilled water. It contains almost exactly one-fifth more than the former English wine gallon, or 5 Imp. gallons = 6 wine gallons nearly. Also 60 Imp. gallons = 59 old ale gallons nearly. [MEASURES AND WEIGHTS.]

GALLOON, a narrow thick ferret or lace, commonly made of mohair or silk; but sometimes of wool, thread, gold, or silver. It is used as edging, and is largely employed in binding hats. The finer kind is manufactured at Coventry, and the coarser at Spitalfields.

GALLS (Fr. *Noix de Galle*. Ger. *Gallapfel*. It. *Galle*. Sp. *Agallas*), a kind of nuts or vegetable wens, from one-fourth of an inch to an inch in diameter, produced on several species of oak trees, by the perforation of insects for the deposition of their eggs. This nest increases in size, together with the larva enclosed in it, which, on arriving at maturity, eats its way out, and hence gall-nuts are generally found with a hole in them. They are in perfection when they have acquired their full size and weight, but before the young insect has pierced them; after which, they become of a brighter colour, and lose part of their weight. The nuts first gathered are called blue and green galls; those later are very inferior in value, and are called white galls. They are sometimes smooth, sometimes covered with spines, of an ash gray, or greenish, or blackish-brown colour. Those which are heavy and not perforated are preferred; but in commerce they are almost invariably found in a pierced state. They are produced abundantly throughout Asia Minor from a small species of oak (*Quercus infectoria*), and the best are those of Aleppo or Mosul, which are about the size of a nutmeg, and mostly of a blueish or grayish colour, hard, heavy, compact, with numerous small tubercles on their surface. The European variety is pale white or brownish, smooth, light, easily broken, and much weaker than the Eastern. Galls abound in astringent matter or tannin, and are largely used in dyeing, inkmaking, and in medicine. They are imported in bags weighing 1 cwt., and in chests weighing from 2 to 3 cwt. each.

GAMBOGE, OR CAMBOGE (Fr. *Gomme Gutte*. Ger. *Gummigutt*), a gum-resin, the product of a tree in Siam, the name of which is doubtful. It is inodorous and nearly insipid to the taste. The best, the pipe-gamboge, is in rolls of a dull orange colour, having a conchoidal fracture, of a deep orange yellow, and a waxy rather than resinous lustre. It also occurs in cakes, fracture uneven, slightly porous, colour less bright, and lustre more resinous. The larger cakes, and such as are dark coloured, should be rejected. Genuine gamboge comes from Siam, and is imported to this country generally by the way of Singapore or China. It is used as a pigment in water-colours, and as an ingredient in some varnishes. It is also a rough and violent cathartic.

GARBLE, the dross and refuse of spices and drugs.

GARBLING, picking out the worst of any commodity.

GARLIC, a perennial plant (*Allium sativum*), a native of Sicily, and cultivated in this country for its root, which consists of pungent acrimonious bulbs, of a strong and offensive smell. It is employed as a condiment, and is an ingredient in curries: it is also used in medicine.

GARNET (from Fr. *Grenat*, of the colour of pomegranate seeds) is a precious stone, of which there are different kinds. The most valuable is the *Almandine*. *precious garnet*, or *carbuncle*, a beautiful crystallized mineral, of various shades of red, with sometimes a tinge of yellow or blue, or a smoky aspect. It is commonly translucent, often transparent. Principal localities, Ceylon, Pegu, and Greenland. *Common garnet* differs from the preceding, in being commonly opaque or only translucent; colour reddish, yellowish, greenish, or blackish brown. It is found in Scotland, Sweden, and other countries. *Pyrope* is a deep blood-red variety, in roundish and angular grains, completely transparent; chief localities, Germany and Ceylon. Others are distinguished by different names; as, *pyreneite*, which is a black variety; *grossular*, of a light olive-green colour; *aplome*, usually of a deep brown or orange-brown, and opaque; *manganesian garnet*, of a deep hyacinth or brownish-red; *melanite*, usually quite black and opaque; *colophonite*, of a greenish, yellowish-brown, or orange-red colour; *allochroite*, of a grayish, dingy yellow, or reddish hue, and opaque; and *topazolite*, which is of a topaz-yellow.

GAS-LIGHT. Gaseous compounds fitted for the purposes of illumination are abundantly produced during the decomposition or destructive distillation of different inflammable substances. These are decomposed in establishments formed for the purpose, and the pure inflammable gases are conducted through pipes to the situations where they are required, and where their consumption may be regulated to the greatest nicety according to circumstances. Coal, oil, and resin are the substances which have been employed in this manufacture.

COAL GAS was the kind first used, and it is still that which is chiefly consumed. The person who first applied it to useful purposes was Mr William Murdoch, of Soho, who, in 1792, employed it for the purpose of lighting his house and offices, then at Redruth in Cornwall. Little further appears to have been done for several years towards making the discovery public. Betwixt 1800 and 1805, however, gas-lights were introduced into several private manufactories, and also exhibited in Paris and London. In 1814, they came into common use in London; in 1818, in Edinburgh; and they are now generally employed in all the large towns in this country, and in many on the Continent.

Coal gas is generated from coal subjected to distillation in iron cylinders or retorts at a red heat. It is contaminated at first with tar, ammoniacal and other vapours, from which it is freed in a condensing vessel, and also with more or less sulphuretted hydrogen and carbonic acid gases, from which it is separated by means of lime, in vessels called *purifiers*. The carburetted hydrogen gas, sufficiently pure for use, is then transmitted into gasometers, whence the pipes issue for the supply of houses and other purposes. A quantity of coke is left in the retort, which, with the tar, ammoniacal liquor, and other refuse matter, is applied to different uses in the arts.

The purification of coal gas is of great importance, because, if the sulphuretted hydrogen be allowed to remain, it is not only highly noxious during combustion, but in the event of the gas escaping it is no less an evil. It is fetid and unwholesome, and causes the immediate tarnishing of silver and other metals: fortunately its presence is readily detected by a piece of paper moistened with a solution of sugar of lead, and no gas should be burned which blackens it. The specific gravity of purified coal gas varies from ·450 to ·650.

The coal best suited for distillation is that which contains most bitumen and least sulphur; and hence the superior purity of the gas procured from the Scotch cannel or parrot coal, owing to the comparatively small quantity of sulphur which it contains, and the more general use of this light in dwelling-houses in Scotland than in England. A chaldron of coals should yield about 12,000 cubical feet of purified gas, of which each argand burner, equal to six wax candles, may be considered as consuming from four to five cubical feet per hour.

Oil Gas is procured abundantly by the decomposition of oil trickled into a red-hot retort, half-filled with coke or brick. It contains no sulphuretted hydrogen, requires no purification, and is much richer in carburetted hydrogen than coal gas. Sp. gr. about ·900. Mr Brande states that "a gallon of whale oil affords about 90 cubical feet of gas, of an average specific gravity of ·900, and an argand burner, equal to seven candles, consumes a cubical foot and a half per hour." Less of it is thus required than of coal gas for any given quantity of light, and the atmosphere of a room is less heated and contaminated by its combustion; but notwithstanding these advantages, the great expense has led nearly to the entire disuse of this kind of gas.

Resin Gas, equal in quality to that from oil, is procured in abundance by a peculiar treatment of resin, and considerable hopes were some years ago entertained that it would come into general use; but later experiments seem to prove that in this country at least it cannot in point of economy compete with that produced from coal.

The economy of gas light is variously estimated. According to Mr Brande, a

chaldron of coals at 25s. should afford 1¼ chaldron of coke at 13s. .	£0	16	3
24 gallons of tar, ammoniacal liquor, and other products at 1d. .	0	2	0
12,000 cubic feet of gas at 10s. per 1000 C. F. . . .	6	0	0
	£6	18	3

"The cost of a lamp fed by gas, and giving the light of 7 candles, will be ¾d. per hour; of Argand's lamp with spermaceti oil, 3d.; of mould candles, 3½d.; and of wax candles, 1s. 2d. per hour." Dr Ure, in estimating the comparative economy of different kinds of light, and assuming the illuminating power from wax to be indicated by 100, states that from tallow to be 28·6; oil, 14·3; coal gas, 4·76; thus making the cost of wax about three and a half times that of tallow, and tallow about six times that of coal gas.

The light from gas, however, besides being procured at a smaller expense, is also more generally convenient than that yielded by other substances in the ordinary mode, as it may be reduced in an instant from the greatest splendour to the faintest degree of illumination by the simple adjustment of the stop-cock. Its uses in buildings of all kinds, whether for industrial or domestic purposes, are universally known and appreciated. Still more conspicuous, perhaps, is its superiority as a street light; and there can be no doubt that, from its application in this manner, our large towns have derived great additional security against the perpetration of crimes.

In London there are 18 public gas establishments, and 12 companies, and the capital invested in works and apparatus is estimated at £3,000,000. [Stocks.]

GAUZE (Fr. *Gaze*), a very light and transparent silken fabric, supposed to have been first made in Gaza, a city of Palestine, from which it derives its name. British gauze is made chiefly at Paisley; but it is inferior to that manufactured in France. [Silk Manufacture.]

GAZETTE, a term applied to newspapers in several parts of the Continent. It is said to be derived from *gazetta*, the name of a small Venetian coin, the usual price of those first published in Italy. In this country the term is chiefly used in reference to the official newspapers. The first English gazette was published at Oxford, whilst the court resided there, on 7th November 1665. On the removal of the royal family to the metropolis, the title was changed to the *London Gazette*, which is now published on Tuesdays and Fridays. There are also official gazettes issued on these days in Edinburgh and Dublin.

GENEVA (Du. *Genever*. Fr. *Genièvre*), a spiritous liquor procured by fermenting a mixture of malt and rye, and distilling the product with juniper berries, by which a spirit is obtained having a peculiar flavour, derived from a volatile oil contained in the fruit. It is powerfully stimulating; and the volatile oil of the junipers having a special action on the kidneys, has led to its being used medicinally in dropsy and other diseases. Geneva is principally made in the Netherlands, and chiefly at Schiedam, a town of S. Holland, about six miles from Rotterdam, from whence it is exported in considerable quantities, especially to this country, the East Indies, and the United States. In the United Kingdom, the annual consumption about the beginning of the present century was nearly 700,000 gallons; but under the blighting influence of the heavy duty shortly afterwards imposed by Mr Vansittart, it gradually fell off, and is now only about 18,000 gallons, though a considerable quantity, about 600,000 gallons, is still imported for re-exportation to the colonies, especially the North American and Australian settlements. [GIN. SPIRITS.]

GENOA. [SARDINIA.]

GENTIAN (Ger. *Gelber Ensian*. Fr. *Gentiane Jaune*), a perennial plant (*Gentiana lutea*) abundant in the Alps and in the mountain forests of Germany, the roots of which are used as stomachic bitters. They are about an inch thick, externally reddish-brown; smell weakly aromatic; taste at first sweetish, then intensely bitter. They also occur of a paler colour; but care should be taken that they are not intermixed with those of white hellebore.

GERMAN SILVER, sometimes called white copper, or pakfong, is an alloy composed generally of copper, zinc, and nickel, the proportions varying according to circumstances. When intended as a substitute for silver, they are—copper 50 parts, nickel 25, and zinc 25. But the proportions in the genuine German silver, as made from the original ore found in Hildburghausen, are given by Keferstein as follows:—Copper, 40·4; nickel, 31·6; zinc, 25·4; iron, 2·6.

GERMANY (Ger. *Deutschland*), an extensive country situate in the centre of Europe, between lat. 45° 5′ and 57° 50′ N., and long. 6° 20′ and 20° 10′ E., bounded W. by Holland, Belgium, and France; S. by Switzerland and Austrian Italy; E. by Hungary, Galicia, Poland, and Russian Poland; N. by the Baltic. Area, 246,000 sq. miles. Population in 1838, 39,000,000. It is divided into 38 different states, independent as regards their interior administration, but, by the treaty of Vienna (1815), united into one body, called the *Germanic Confederation*, which, by means of a federative diet, professes to maintain the external and internal security of the country. The ordinary business of the diet is transacted by a permanent minor council, composed of 17 votes, of which 11 principal states, namely, the Austrian empire, the kingdoms of Prussia, Bavaria, Saxony, Hanover, and Wurtemberg, grand duchies of Baden, Hesse-Darmstadt, and Luxemburg, electorate of Hesse-Cassel, and duchy of Holstein, have each 1, and the other 27 only 6 votes; but when weighty affairs are under consideration, the diet forms itself into a general assembly, called *Plenum*, which contains 69 votes, of which Austria and the 5 German kingdoms have each 4 votes, and the others are distributed among the remaining states, according to their importance. The members convene at Frankfort on the Maine, and the presidency is vested in Austria.

The country, considered in a general point of view, is divided into two great portions by the Sudetic chain of mountains,—the northern and southern. The former is almost entirely level, including vast tracts of low sandy soil in the N.E., and swamps and marshes in the N.W.; and the coast is in some places so low as to require dikes to defend it from the sea; in this division, the soil, except in Saxony, is in general poor, but not unsusceptible of improvement. The southern portion is more diversified, presenting great ranges of hills, and in some districts extensive plains; the land is also superior, and in many places extremely fertile.

The climate of Germany is less variable than the nature of its mountain system, and the range of latitudes within which it lies, would lead us to imagine; and its vegetation resembles, in its general character, that of England, or rather the N. of France. The chief products are, corn, maize, buckwheat, garden fruits, pulse, potatoes, hemp, flax, hops, rapeseed, madder, wood, saffron, aniseed, liquorice wood, coriander seeds, mustard. The most common trees are, oaks, beeches, firs, pines, larches, alders, birch. The vine, except in situations peculiarly sheltered, does not grow north of lat. 51° N. The wine country commences about the junction of the Neckar with the Rhine, and stretches southward; and about thirteen millions of eimers are annually made on the Rhine, Neckar, Maine near Meissen, and Naumberg in Saxony, in Austria and Bohemia. The best are the Rhenish wines, and next to them are those from the banks of the Moselle, and some of the Austrian provinces. The domestic animals do not differ materially from those of the neighbouring countries. The Merino breed of sheep has been introduced into Saxony and other states, where it has succeeded so well that, after supplying a great internal demand, immense quantities of wool are now exported to Britain and other places, of a quality so fine that the Spanish wool trade has been nearly extinguished.

Germany is rich in minerals, particularly the Hartz mountains and Erzgeberge. According to a recent authority (*Hawkins' Germany*), the principal are, silver, 123,000 marks annually, found chiefly in the Erzgeberge and in the Hartz; gold, 182 marks; iron, 3,000,000 cwt.; copper, 39,000 cwt.; tin, 8000 cwt.; lead, 200,000 cwt.; quicksilver, 6180 cwt., in Idria and Zweibrucken; cinnabar, 8000 cwt.; cobalt, 16,000 cwt.; zinc, sulphur, coal, marble, alabaster, gypsum, alum; vitriol, bismuth, antimony, saltpetre, lime, asbestos, slate; rolling, mill, sand, and pumice stones; calcedony, basalt, agate, amethysts, granite, porphyry, precious stones; and great quantities of spring and rock salt—6,000,000 cwts. are produced by 76 salt-works now in operation.

The industrious spirit of the Germans has urged them forward, notwithstanding numerous disadvantages. to considerable progress in manufactures. The principal are those of linen, in Silesia, Bohemia, Westphalia; of woollen goods, on the Lower Rhine, in Saxony, Silesia, and Brandenburg; of silk, leather, cotton goods, and lace, in the Erzgeberge; of tapestry, paper, and glass, in Bohemia and Silesia; of mirrors, near Nuremberg; of china, at Berlin, Meissen, and Vienna; of delft ware, in various places; of jewellery, at Berlin and Augsburg; of iron wares, in Westphalia and the Rhenish countries; of firearms and swordblades, at Spandau, Potsdam, and some other places; of cannon, at several capitals; of gunpowder, tobacco, artificial flowers, straw hats, musical and other instruments, beer, brandy, liqueurs, vitriol, and sugar. The Germans are celebrated as sugar refiners. The manufactures of cotton were established during the war, in emulation of those of Britain; but their inferior machinery, and the scarcity of fuel, enable them to maintain this manufacture and most of the others only under heavy protecting duties. The broad cloth of Saxony, however, and its thread, lace, linen, paper, and porcelain, are of superior quality.

The mental energy of the Germans has long rendered their book-trade a business of great importance; and of late years, owing to the continuance of peace and the growing demand in foreign countries for German books, this branch has greatly increased, and is now in some respects unequalled in the world. Before 1814, the annual amount of works published was about 2000; in 1816, the number was 3197; in 1827 5108; in 1834, 6074. The publications are announced in catalogues circulated at the fairs held at Leipsic, at Easter and Michaelmas, which are attended by all the German booksellers, and by many from the adjoining countries. The catalogue of the Easter fair of 1837 contained 4353 new books and pamphlets, or new editions. Of these 3924 were issued in Germany (including Switzerland, Hungary, and the part of Prussia not belonging to the Germanic Confederation), and were produced by 561 publishers. The works were contributed by the different states in the following proportions: Austria, 226; Prussia, 1151; Bavaria, 469; Saxony, 669, including 556 for Leipsic alone; Wurtemberg, 331; Baden, 156; Hamburg, 123; Hanover, 106; other states, 693. The number of booksellers and publishers is at present estimated at more than 1000; and, according to Dr Bowring, the number of persons engaged in the literary profession in Germany is reported to be about 18,000, independently of 4000 translators from foreign languages. This immense production is attributed to the general diffusion of education; to the demand for public functionaries and professional persons by the subdivision of the country into many different states; and, lastly, to the industry of the educated classes being directed into this channel by their want of political liberty. The result, however, is still extraordinary, more especially when it is considered that every work or journal, before it can be printed, must be examined by a public censor, and that no general copyright law exists among them. In some states, literary property is protected; in Prussia, by a law passed in 1838, it is secured to authors until their death, and to their representatives for 30 years afterwards. In other states,—as for example, in Wurtemberg and in Austria, any work may be pirated which has not been published under the especial protection of the respective governments. Before the publisher could undertake the edition of Goethe's works, which appeared about 12 years ago, he was obliged to solicit protection against piracy from each of the thirty-eight sovereignties; and it was granted to him in all cases as a privilege; and this is the only work which has appeared with the "privilege of protection" from the whole German Confederacy.

The internal commerce of Germany is considerable, and is facilitated by means of its inland communication, in which it is more favoured by nature than any other European country. Of rivers, the Rhine runs upwards of 700 miles, throughout the greater part of which it continues navigable; the Elbe, also a navigable stream, extends 575 miles; there are likewise the Oder, Weser, Ems, Maine, and Neckar; and the mighty Danube, which, though scarcely yet rendered fully available, appears destined to surpass all the others in political importance: the total number of navigable rivers, including tributary streams, are stated by Balbi at sixty. The canals are not numerous; the principal are the Eider canal; the Planen canal, between the Elbe and the Havel; the Finow canal; the Mullroese canal, between the Spree and the Oder; the Bavarian canal, between the Iser and the Anamer; the Papenburg canals; the canal from Vienna to beyond Nieustadt; and the canal which unites the Steckenitz with the Trave at Lubec. Railroads are not neglected in Germany, though their extension depends on the will of the governments, which does not always correspond with the interests of individuals. Many of the great towns are already united by this means; but the whole of Central Germany, and particularly the wealthy land of Saxony, is still separated from the sea and Belgium by a considerable space between Frankfort and Leipsic. A railroad connecting these cities is however in contemplation, and when finished will complete the junction, by this mode of conveyance, of Berlin, Dresden, and Brussels. From this great commercial road important lines would branch off, connecting Bavaria and the duchies of Coburg and Meinengen on one side with the North Sea by Cassel and Bremen, and on the other with the Rhine and the Belgian railroads.

The maritime commerce of Germany is comparatively of limited amount, owing to its small extent of seacoast, which embraces only about 630 British miles, namely, 330 on the Baltic, 140 on the North Sea, and 160 on the Adriatic. Several towns, however, on the shores and the principal rivers, enjoy a very extensive trade. Of these, the chief on the Baltic are Stettin, Stralsund, Rostock, Wismar, and Lubec; on the North Sea, Hamburg, Altona, Bremen, and Embden; and Trieste on the Adriatic. The principal exports are wool, linen, wine, corn, wood, smoked and salted provisions, thread, iron, steel, Nuremberg wares, quicksilver and cinnabar, glass, mirrors, cattle, fruit, salt, potash, porcelain, and earthenware, wax, leather, lead, woollen and cotton goods, rags, bones, quills, skins, alum, lead, and vitriol. The chief imports are tropical and colonial produce, mostly at Hamburg and Trieste; British manufactures, principally twist and yarns, with cotton, woollen, and metal goods; wine, tobacco, southern fruits, fancy goods and linseed. The chief port for emigration from Germany is Bremen.

The manufacturing and commercial prosperity of Germany was formerly much obstructed by the partition of its territory among so many separate communities, which not only gave rise to many factitious interests and conflicting systems of internal regulation, but prevented the necessary unity of effort and combination of resources. Of late years, however, this obstruction has been in a great measure removed by the commercial union or league, first formed in 1831, under the auspices of Prussia, and which has been since gradually joined by most of the other states. The professed object of this combination is to establish an entire freedom of trade among the German states, and to subject foreign trade to such restrictions only as the protection of national manufactures, or financial circumstances, may render necessary. Under the head PRUSSIAN COMMERCIAL UNION, a detailed account is given of this celebrated league, and of its influence, viewed in connexion with the present state and prospects of the trade of Germany. Further information will be found in the articles devoted to the principal states, and the free cities or republics, HAMBURG, BREMEN, FRANKFORT, and LUBEC.

MEASURES, WEIGHTS, AND MONIES.

The monies, weights, and measures of the different states are described under their respective heads; but an opportunity will be taken here of explaining some general usages, particularly those which have arisen out of the German federative system.

THE MEASURES of capacity and length vary, but the divisions of the latter are generally the same, namely, the ruthe = 2 clafters, 6 ells, 12 feet, or 144 inches; the Rhineland or land-surveyor's foot = 12·36 Imp. inches.

The geographical mile = 8101 Imp. yards, or 4·60 Imp. miles; the long mile = 10,126 Imp. yards; the short mile = 6859 Imp. yards.

The Rhineland morgen = 10,185 Imp. square yards, or 4¾ Rhineland morgens = 10 Imp. acres nearly.

The commercial pound contains 2 marks, 16 ounces, 32 loths, 128 quentins, 312 pfennings, or 1024 hellers; the apothecaries' pound of 12 ounces, 96 drams, 288 scruples, or 5760 grains = 5527 troy grains; the carat for jewels = 3·171 troy grains.

Gold and silver are weighed by the Cologne mark of 8 ounces, 16 loths, 64 quentins, 256 pfennings, 512 hellers, or 4852 eschen = 3608 troy grains; the fineness of gold is expressed by dividing the mark fine or other weight into 24 carats, each of 12 grains; the fineness of silver, by dividing the mark fine into 16 loths, each of 18 grains; in both cases the mark fine containing 288 grains.

MONEY.—The integer of account (except in the few places where the Lubec currency is used), is either the florin (*gulden*), or the dollar (*thaler*), called also the rixdollar, and sometimes the crown. The florin is commonly divided into 60 kreusers, each of 12 pfennings, and the dollar *current*, or of account (a nominal or fictitious money equal 1½ florin), into 90 kreusers. In North Germany, however, the dollar is in general divided either into 24 good groschen, each of 12 pfennings, or as in Prussia, where the dollar of account is a coin, into 30 silver groschen, each of 12 pfennings. The different standards by which these denominations are valued may be described as follows:—

Leipsic or *Constitution Money*, introduced in 1690, and which formed the general standard of the empire from 1738 to 1763, was estimated at the rate of 9 rixdollar specie (or *Old Imperial dollars*), 12 rixdollars current, or 18 florins, to the Cologne mark of fine silver, making the value of each of these monies in sterling 4s. 6¼d., 3s. 4½d., and 2s. 3d. respectively. The Leipsic rixdollar current is now nearly obsolete, and the coins are comparatively rare.

Convention Money, introduced in 1763, is valued at the rate of 20 florins to the Cologne mark of pure silver, whence it is also termed 20 *Gulden-fuss* (florin-foot). The florin is minted 13⅓ loths, or ⅚ths fine, and its full weight is 216½ troy grains. Two florins = 1⅓ rixdollar current = 1 rixdollar specie (or *German specie-dollar*) = 48·757d. or 4s. 0¾d. Hence the florin = 2s. 0⅜d. nearly, and the rixdollar current (= 1½ florin), 3s. 0½d. There are likewise pieces for ⅓, ⅙, and $\frac{1}{12}$, rixdollar current; also for 20 kreusers (*kopstuck* or *zwanziger*), and 10 kreusers. Convention money is in general use in Austria and Saxony; in other states its employment is confined principally to the higher departments of business.

Reichsgeld, or 24 *Gulden-fuss*, is estimated at the rate of 24 florins to the Cologne mark of pure silver, whence the florin = 20·315d., or about 1s. 8¼d.; and the rixdollar current (1½ florin) = 2s. 6½d. These, however, are chiefly nominal valuations of Convention money, at a rate ⅕th higher than in that standard,—the Convention florin being estimated in Reichsgeld at 1⅕ florin, and the other denominations in proportion. Prior to 1838, Reichsgeld was in common use in Rhenish-Germany, but is now mostly superseded by the new 24½ florin rate.

9 Constitution florins or current rixdollars = 10 in Convention money = 12 in Reichsgeld.

The New Crown Standard, introduced in 1838, is valued at the rate of 24½ florins to the Cologne mark of pure silver, whence the florin = 19$\frac{9}{10}$d. or about 1s. 8d. This florin is a coin which has been adopted as the integer of account by the states of Southern and Western Germany, including Baden, Bavaria, Frankfort, Hesse-Darmstadt, Nassau, and Wurtemberg. The other coins of this standard are the half-florin, and the crown (*kronenthaler*) = 5s. 9¼d. There are besides pieces in billon for 1, 3, and 6 kreusers.

The Prussian System is described under the head PRUSSIA. In 1834, the dollar in this system was adopted as the integer of account by several states of North Germany, including Hanover, Brunswick, and Hesse-Electoral or Cassel.

These standards consist wholly of silver, which is the general measure of value. A variety of gold coins, however, circulate. The principal are the ducat (minted 67 to the Cologne mark 23⅔ carats fine), worth about 9s. 4d.; the gold florin 6s. 11d.; the Bavarian carolin 20s. 4d.; and the pistoles termed Frederick d'or, Carl d'or, August d'or, George d'or, Christian d'or, &c., each worth nearly 16s. 4d.; these pistoles (minted 35 to the Cologne mark 21⅔ carats fine), were all reckoned originally at 5 Convention rixdollars current, but they now bear an agio corresponding to the increased value of gold in relation to silver. Several of the gold coins have doubles and halves of proportional value.

Of foreign coins, the most common are the Dutch gold pieces for 10 and 5 guilders, and the Brabant crown, originally struck by the emperor in the Low Countries, equal about 4s. 6d.

GHEE, in Oriental commerce, is clarified butter, made generally from the milk of buffaloes, and is an article of great importance in India, Arabia, and other Eastern countries. It will keep fresh for a considerable time, and is commonly conveyed in bottles made of hide, called duppers, which contain from 10 to 40 gallons each.

GIBRALTAR, an important military and commercial station belonging to Great Britain, situated on a mountainous promontory on the S. coast of Spain, at the entrance from the Atlantic into the Mediterranean, near the part where the sea between Europe and Africa is narrowest; the mole being in lat. 36° 7′ N. and long. 5° 21′ W. It consists of a town and a strongly fortified rock, having batteries mounting upwards of 1000 cannon. Population about 15,000, composed chiefly of British, Spaniards, Italians, and Jews, besides a garrison of nearly 3500 troops. It is ruled by a military governor.

The promontory of Gibraltar consists of a vast mass of rock, extremely cavernous, and rising from 1200 to 1400 feet above the sea. It is about 3 miles in length from N. to S., varies in width from ½ mile to ¾ of a mile, and is joined to the Spanish main by a low sandy isthmus about 1½ mile in length. The rock on the N. side, fronting this isthmus, is perpendicular and wholly inaccessible; the E. and S. sides are also steep and rugged; but on the W. side, fronting the bay, where the town is built, the rock declines into the sea. Here, however, the fortifications are such as to seem impregnable. The town, consisting chiefly of one long street, is not neat, and formerly was ill-ventilated and dirty, but of late it has been considerably improved in these respects. Provisions are principally derived from Africa, and water is collected in tanks during the rainy season, the nearest spring, which is brackish, being on the neutral ground. The climate is generally healthy, though rather warm, the temperature ranging from about 85° in July to 50° in January. The winds are commonly east or west; the former prevailing mostly in July, August, and September; the latter in December, January, and May.

Gibraltar forms a convenient naval station, being situated in a bay 4½ miles broad, and 9 miles long, which is protected from all the more dangerous winds, while the harbour is secured by two long moles. Being also a free port, subject to few or no duties or restrictions, it is a convenient entrepôt for merchandise destined for the neighbouring countries, particularly those of Spain and Africa. During the last war, it became the seat of an immense commerce, and in one year the value of British manufactures exported into it, exclusive of colonial produce, is stated by Mr Martin to have amounted to nearly £3,000,000. But various circumstances have since occurred to diminish this trade; the chief being the opening of other ports in the Mediterranean to a more extended intercourse with Great Britain, the dread of yellow fever, which, in the years 1804 and 1828, produced great mortality in the town (but against which greater security now exists owing to the recent opening up of the streets), and the various edicts of the Spanish government, which place it almost in a state of commercial non-intercourse with that country, under the plea of preventing smuggling into the provinces adjacent to the fortress. The illicit intercourse with Spain, however, is still, notwithstanding, pretty considerable, and of late years the general trade of the port exhibits symptoms of revival. The declared value of British manufactures and produce sent to Gibraltar was, in 1821, £1,218,183; in 1825, £908,722; in 1830, £292,760; in 1835, £602,580; and in 1839, £1,170,702; consisting mainly of cotton manufactures, but comprehending also linen and woollen goods, apparel, iron, hardware, cutlery, earthenware, and coals. A considerable quantity of foreign and colonial articles, such as spices, tobacco, India cottons and silks, rum and indigo, are likewise carried thither from England. The goods exported to this country from Gibraltar consist of Spanish wine, sheep's wool, and a few other articles, the amount in all being, however, quite trifling. A considerable intercourse is also maintained with the countries adjoining the Mediterranean, as well as the United States and West Indies; and the total number of vessels which entered the port in 1839 was 3618, burden 282,872 tons; whereof from Great Britain, 52,547 tons; British colonies, 11,399 tons; United States, 18,955 tons; foreign countries, 199,971 tons.

Mercantile differences are commonly referred to the judge-advocate: from his award an appeal may be made to the governor, whose decision is final, unless the sum in dispute exceed £300, when a further appeal may be made to the privy-council. The increase of new residents is discountenanced; but foreigners are allowed permission to remain during specified periods, on giving security.

MEASURES, WEIGHTS, MONEY, FINANCES, &c.

Measures and Weights.—British measures and weights are employed; also the following Spanish, namely, the pipe of 117 galls. = 126 English wine galls., or 105 Imp. galls.; the arroba liquid measure = 3⅓ English wine galls., or 2·77 Imp. galls.; the arroba weight = 26 lbs. avoird.; the quintal of 100 lbs. = 101½ lbs. avoird.; 5 fanegas of grain (strike measure) = 8 Winchester, or 7¾ Imp. bushels.

Money.—The integer of account is the Spanish hard dollar (or *cob*) divided into 12 current reals, each of 16 quartos, or into 100 cents.

3 current reals = 5 Spanish reals vellon.

Formerly the money of account was the current dollar of 8 reals, a fictitious money equal two-thirds of the hard dollar, the reals and quartos of both being the same. The currency is composed of dollars, pesetas, gold doubloons of 16 dollars, and of a small quantity of British silver and copper coins; no paper money is in circulation.

Bills on London, Marseilles, Paris, and Genoa, are drawn at 90 days' date; and on Cadiz, Malaga, Madrid, and Seville, at 8 days' sight. The days of grace are 3, except when the term "fixed" is inserted. The exchange on London (90 days' date) is usually at from 50d. to 51d. per dollar,—the pillar dollar, however, bearing ½ to 3 per cent. premium.

Shipping Duties are now levied on all vessels arriving or touching at the port or anchorage in lieu of the former quarantine rates; namely, for every square-rigged ship having 3 masts, £2, 3s. 4d.; brig, £1, 14s. 8d.; schooner, sloop, zebeque, galliot, or like rigged fore and aft vessels, £1, 1s. 8d.; small coasting-vessel, 17s. 4d.; with 8s. 8d. in addition when the vessel is liable to quarantine. For every day's attendance by a health-guard, when embarked, 4s. 4d.; for every visit by a health-guard to a vessel in quarantine, 2s. 2d.; for every day's attendance by a health-guard in superintending the discharge of a vessel in quarantine, 8s. 8d.; for every bill of health, 4s. 4d.; and indorsement thereof, 4s. 4d.[*]

Finances.—The annual revenue, £30,000, is about equal to the civil expenditure. In the year 1835-1836, the military charges, defrayed by the home government, amounted to about £140,000.

The S. part of the promontory, called Europa Point, is distant 11½ miles from Ceuta, on the opposite coast of Africa. Gibraltar is the *Calpe* of the Greeks, who gave to it and Abyla, on the African coast, the name of "the Pillars of Hercules." It was long in the possession of the Moors, and did not become an appanage of Spain until 1462. It was first fortified in the modern style by Charles V. In 1704, it was captured by the British, in whose possession it has since remained, but not without several attempts to retake it by Spain; these occurred in 1705, 1727, and 1779. The last was the most memorable, and lasted until 1783.

GIN, a spiritous liquor made in England, in imitation of Dutch Geneva. [GENEVA.] It is generally prepared by adding various flavouring ingredients during the rectification of spirits made from barley or oats. The principal and only acknowledged one is the juniper berry; but oil of turpentine and other substances are said to be also used. The consumption of gin is chiefly confined to the labouring classes in England, and especially London. In Scotland and Ireland a preference is given to whisky. [SPIRITS.]

GINGER (Fr. *Gingembre*. Ger. *Ingwer*. Por. *Gengivre*. It. *Zenzero*. Rus. *Inbir*. Sp. *Jenjibre*), the root of a plant (*Amomum zingiber*) cultivated throughout both the East and West Indies and China. It occurs in knotty branched pieces, having a pleasant aromatic odour, and biting taste. There are two varieties, the black and the white. *Black ginger* consists of the inferior roots, which have been immersed in boiling water previously to being dried, and has thus a horny texture. *White ginger* consists of the fairest and roundest roots, peeled when fresh, and dried in the sun. It is firm and resinous, more pungent than the black, and generally one-third dearer. The roots which are worm-eaten, light or soft, and very fibrous, are to be rejected. *Preserved ginger*, as manufactured in Europe, is dark and fibrous; but when prepared in the East or West Indies or China, from the young roots, it is almost transparent. It is imported in jars, and should be choosen in large pieces of a bright yellow colour.

GINSENG (Fr. It. Du. & Ger. *Ginseng*. Sp. *Jinseng*. Por. *Ginsao*. Chin. *Yansam*), the root of a plant (*Panax quinquefolium*) indigenous to Chinese Tartary, but cultivated in Kentucky in North America, from whence the root is exported to China. It occurs in pieces about three or four inches long, frequently forked, transversely wrinkled, and of a yellowish colour; it has little or no smell, but a sweetish and slightly bitter-warm taste.

Ginseng is discarded from the British materia medica, but it is in great repute in China, where, from immemorial ages, it has been extolled as a panacea or universal medicine; whence its present generic name, which signifies a remedy for all things. Père Jartroux says that the most celebrated Chinese physicians have written volumes on the *Gen-seng*, which they affirm to be able to ward off or to remove fatigue, to invigorate the enfeebled frame, to restore the exhausted animal powers, to make old people young, and, in a word, to render man immortal; this saving clause being, however, added by the more cautious, "if any thing on earth can do so." Hence the name *gen-seng* signifies the "wonder of the world," or "the dose for immortality." In 1709, the emperor sent an army of 10,000 Tartars in search of it, on condition that each soldier should give him two catties of the best, and sell the rest for its weight in silver.

GLASS (Fr. *Verre*. Ger. *Glas*), a well-known substance, in a high degree solid, brittle, and transparent, formed by the fusion of siliceous and alkaline matter. Five kinds are usually distinguished in this country:—1. Bottle-glass, the coarsest and most simple of any; 2. Broad-glass, a coarse window-glass, but of which there is an improved kind now made, termed British or German sheet; 3. Crown-glass, or the best window-glass, formed in large circular plates; 4. Flint-glass, or crystal; 5. Plate, or fine mirror-glass. These varieties are produced by differences in the proportion of the constituents, the nature of the alkali, the presence of foreign matters, or the processes of manufacture. Thus, green bottle-glass is made of impure materials, such as sea or river sand, which contains iron, and the most common kind of kelp or pearl-ashes. Window-glass is made of a purer alkali, and sand which is free from iron. Plate-glass is composed of sand and alkali in their purest state; and in the formation of flint-glass, besides these pure ingredients, a considerable quantity of litharge, or red lead, is employed. A small quantity of peroxide of manganese is also used, in order to oxidize carbonaceous matters contained in the materials of the glass; and nitre is sometimes added with the same intention. According to Mr Faraday, ordinary flint-glass contains 51·93 per cent. of silica, 33·28 oxide of lead, and 13·77 of potash. The finest sand used in our glass-houses is procured from Lynn in Norfolk, and Alum Bay in the Isle of Wight.

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[*] In these charges the dollar appears to be estimated at 4s. 4d. sterling, according to Order in Council.

In this country, the glass manufacture was at an early period of its history made an object of taxation, and in 1694, duties were imposed, which acted so injuriously that in a very few years the whole were repealed. About half a century later (1746), when the manufacture was in a more advanced state, a duty was again imposed, at the rate of one farthing per pound on the materials used for making bottle-glass, and one penny per pound on those used for crown, plate, and flint-glass. These rates were advanced from time to time in common with most other duties, and in 1793, stood as follows:—Bottle-glass, 4s. 0½d. per cwt.; broad-glass, 8s. 0½d. per cwt.; crown-glass, 16s. 1¼d. per cwt.; and for plate and flint glass, 21s. 5½d. per cwt. Further augmentations were afterwards made; and in 1813, when the former rates were doubled, they were—for bottle-glass, 8s. 2d. per cwt.; broad-glass, 24s. 6d. per cwt.; crown-glass, 73s. 6d. per cwt.; and for plate and flint-glass, 98s. per cwt. These rates were partially abated or modified in the years 1819, 1825, 1830, and 1835; and in 1838, they were fixed (1 & 2 Vict. c. 44) as follow:—Bottle-glass, 7s. per cwt.; broad-glass, or spread window-glass, 30s. per cwt.; crown-glass, and German sheet-glass, 73s. 6d. per cwt.; for material employed in the making of plate-glass, 60s. per cwt.; and on the fluxed materials or other preparation employed in making flint-glass, 6s. 8d. per cwt. By a later act (2 & 3 Vict. c. 25) it is explained that no glass is to be deemed broad or spread glass, and so to have the privilege of the low duties, unless it be blown in cones and spread on sand; and by 3 & 4 Vict. c. 22, the same duties were imposed upon broad or spread glass that are payable upon German sheet-glass.

These excessive duties have materially checked the use of glass in this country, and until within the last few years, the quantity made was less than before the war of 1793, notwithstanding the great increase of population in the interval. The vexatious and complicated regulations necessary for the collection of the duties have also so interfered with the manufacture as to prevent the introduction of many improvements,—especially in the economical processes. Hence, notwithstanding the advantages which Great Britain enjoys as to fuel, which forms a large part of the cost of the manufacture, and although she likewise possesses nearly all the materials of which glass is composed, and can procure the rest as cheaply as any other manufacturing country, yet there is not any other in which glass is made where its price allows our produce to be brought into competition with their own. The quality of British glass, however, is good, and our plate-glass now rivals that of France. Of late years also, a gradual fall of prices has taken place, which may be held as an indication that some economical improvements have been introduced, notwithstanding the obstacles presented by the excise laws.

A separate cause of the disadvantageous contrast which the glass manufacture presents to our other branches of industry, is perhaps to be found in the fact that in order to work profitably under the excise regulations, it is necessary to conduct the processes upon so large a scale as to create a virtual monopoly of the manufacture in the hands of a few,—a state of things unfavourable to improvement. In the year 1839, the number of glass manufacturers in the United Kingdom was only 148; of whom, 124 were in England, 15 in Scotland, and 9 in Ireland. The principal English works are situated at Newcastle upon Tyne and Shields, owing to the cheap rate at which fuel can be obtained in those places; the others are mostly in or near Stourbridge, Liverpool, Bristol, St Helens, Warrington, Birmingham, Leeds, and London. The Scottish are chiefly in the districts of Edinburgh and Glasgow, and at Alloa. The Irish at Dublin, Cork, Belfast, Waterford, and Newry.

The statutory regulations of the manufacture are chiefly embodied in the glass consolidation duties act, 1 & 2 Vict. c. 44, and the 2 & 3 Vict. c. 25, already alluded to. These, especially the first, contain a multitude of minute technical provisions, to which, as the originals will doubtless be in the hands of all persons interested, it is not thought expedient to devote space here.

The following tables, the first of which is abridged from Mr Porter's "Progress of the Nation," will serve to illustrate the recent history and present condition of the manufacture :—

ACCOUNT of the Progress of the Glass Manufacture from 1790 to 1830.

		1790.	1800.	1810.	1820.	1830.
Manufactured and retained for Home Consumption.						
Common Bottle	Cwt.	215,034	159,334	252,872	167,208	163,549
Broad	Cwt.	21,302	19,874	9,176	7,782	4,845
Crown or German sheet	Cwt.	81,285	55,821	69,252	70,253	84,178
Plate	Cwt.	44,527	61,748	68,872	8,822	13,057
Flint	Cwt.				29,437	48,063
Plate, &c. imported	Cwt.	1,270	2,235	120	202	104
	Feet	11,375	1,958	....	....	1,436
Net Revenue of Customs and Excise		£160,058	£188,240	£318,832	£469,609	£542,595

TABLE showing the Quantities of the different Kinds of Glass charged with Excise Duty, the gross Duty levied, the Duty drawn back on Exportation, and the net Revenue in the Year 1839.

	Quantities Charged.				Gross Duty.	Draw-back.	Net Revenue.
	England.	Scotland.	Ireland.	Total.			
	Cwt.	Cwt.	Cwt.	Cwt.	£	£	£
Bottle-glass	366,039	107,021	12,106	485,166	169,808	81,327	88,481
Broad	8,514	....	....	8,514	12,771	....	12,771
Crown and German sheet	131,333	5,379	....	136,712	502,417	66,892	435,525
Plate	28,413	....	....	28,413	85,239	5,846	79,393
Flint	90,084	7,467	7,407	104,955	97,958	21,142	76,816
					868,193	175,207	692,986

The declared value of the exports has been for a late series of years as follows:—

1830.	1835.	1836.	1837.	1838.	1839.	1840.
£401,543	£640,410	£553,384	£477,767	£377,283	£371,208	£416,526

These exports, consisting principally of bottle-glass, crown and German sheet-glass, chiefly take place to the British colonies and India, which, indeed, take fully two-thirds of the whole ; of the remainder, about £50,000 goes to the United States, £20,000 to Brazil, and the rest in very trifling quantities to various places.

The glass manufacturers are among the very few who seek for protection against foreign competition, and the import duty on foreign glass ranges generally from about 30 to 40 per cent. above the excise duty ; it is, in fact, prohibitory ; and although the difference of price in this country is from 100 to 200 per cent. higher upon inferior articles, such as bottles and common window-glass, than in France and Germany, there is, owing to the bulky and brittle nature of these articles, no contraband trade. A small sum of customs duty appears annually in the public accounts, but this is derived almost wholly from bottles imported full of wine or spirits.

The common account of the origin of glass is that of Pliny, who relates that some sailors having landed on the shore of Phœnicia, at the mouth of the Belus, and wishing to cook their provisions, placed some pieces of salt (of which their cargo consisted) under their pots to support them, there being no stones in the neighbourhood, when the heat formed the salt and the sand of the shore into a transparent liquid vitrified mass. This production was picked up by a Tyrian merchant, who was led to investigate its origin, and after many attempts succeeded in making glass. The Tyrian glass manufactures are known to be of high antiquity; and it is not improbable that an accidental vitrification might give rise to the discovery of glass ; but Pliny's story is now accounted to be fabulous, as it has been lately ascertained that the art must have been known to the ancient Egyptians. Of this we have evidence not only from numerous specimens of glass found in the tombs and among the ruins of the temples, but also from the painted representations of the manufacturing processes preserved in the same places, and which prove that they were not only skilled in the art of fusing the materials, but also in the use of the blow-pipe,—an invention so ingenious as to indicate a high degree of civilisation. From Egypt the art appears to have been diffused among the Phœnicians, Greeks, and Romans. In Rome, the glass makers, who had a particular street assigned to them, were chiefly employed in the manufacture of bottles and ornamental vases, and proofs of their skill may be seen in the British Museum, though the "metal" is usually thick and coloured. According to some authorities, glass was also employed by the Romans in glazing windows, but the first undoubted testimony of its application in this way is that of Lactantius in the fourth century, who compared a penetrating mind to one looking through a glass window. It seems to have been first used in the glazing of religious edifices,—a purpose for which it was at a very early period imported into Britain.

In the middle ages, the art appears to have been confined to Italy and Germany. In the thirteenth century, the manufactories of Venice supplied the greatest part of the glass used in Europe. The artists of Bohemia were also held in considerable estimation. In England, glass-making was first practised in the year 1557, when a manufactory was erected at Crutched Friars in London; and shortly after, another at the Savoy in the Strand. These establishments chiefly confined themselves to common bottle and window glass, all the finer articles being still imported from Venice. In 1673, a manufactory of plate-glass was established at Lambeth by the celebrated Duke of Buckingham, who brought workmen for that purpose from Italy. But this establishment was soon after abandoned; and it was a century later before the manufacture of mirrors and fine glass was prosecuted on a large scale. The use of glass casements was long confined to the higher ranks, and it was near the end of the seventeenth century before the glazing of windows became general in this country.

GLAUBER SALT, sulphate of soda. [SODA].

GLOVES (Du. *Handschoenen.* Fr. *Gants.* Ger. *Handschuhe.* It. *Guanti.* Por. *Luvas.* Rus. *Rukawizii.* Sp. *Guantes*), coverings for the hands, made generally of leather, but frequently also of cotton, silk, worsted, and linen. Of the first, the finest are those made from the skin of the kid, which are extensively manufactured in this country, though of a quality inferior to those imported from France. In England, the chief seats of the leather glove manufacture are, Woodstock (distinguished for those of fine quality), Worcester, Yeovil in Somersetshire, London, Ludlow, and Leominster; in Scotland, superior gloves are made at Dundee. Cotton gloves are chiefly manufactured at Nottingham and Leicester. [HOSIERY.] The principal kinds of gloves are described by Mr Perkins, in his useful "Treatise on Haberdashery and Hosiery," as follows:—

> "*Kid* is valuable in proportion to its elasticity. When this quality is united with closeness of texture, the gloves called 'town-made' are so superior to most others of our own manufacture, as to rival the French, and disprove the prevailing opinion of the superiority of the latter. Independent of the quality of the kid, a good glove is distinguished, first, by its being neatly sewed; secondly, by the thumb-seam not extending too far into the palm; and, lastly, by the colour of the exterior not having soiled the inside. Most of the lower-priced English gloves, offered as 'kid,' are in reality made of lamb-skin. When what is called a kid glove feels unusually stout, it may be considered highly probable that it is only lamb-skin in imitation. It must consequently be understood that all good kid, in addition to the qualities already described, must be reasonably thin. Three-fourths of those passing under the title of French gloves are made in this country; French kid gloves are made in this country of French or Italian skins; and it is usual to apply to these the name which properly belongs to the former. The best skins are most decidedly the French; next, the Italian; and, lastly, those from Ireland. *Limerick* is a very sleazy and somewhat gritty feeling glove of the kid kind, made in Ireland; very little in demand except in that country. *Beaver*, though the quality is various, forms the commonest description of leather gloves. The *Woodstock* is a very superior beaver, to which much attention is paid both to the shape and sewing. *Doeskin* is a more thick, durable, and soft leather than the Beaver or Woodstock: in its make it does not excel the latter, though it surpasses the former. *Buckskin* is the closest grained, and consequently the strongest leather of which gloves are made. Its elasticity, though trifling, is sufficient. It also bears cleaning better than any other kind. It may be had in white, drab, or buff. *Sheepskin* is generally white, and most usually made by contract for the army. *Tan* is of three qualities, common, drawn, and York. This is a very serviceable and cheap glove for gardening, riding, or driving. The strongest of each class is sewed peculiarly, and termed pricked seam. The quality of *silk gloves* is determined by weight and neatness of sewing. They may be had in white, black, French white, and colours. *Thread gloves* are made of hemp, and are neater in appearance, though much resembling those made of cotton. Neither of them, however, can be recommended, except on the score of economy. *Berlin gloves* were originally imported from Berlin and some parts of Switzerland, but are now manufactured by ourselves. They are certainly a great improvement on the old cotton gloves." (6th Edition, p. 106.)

The introduction of foreign gloves into the United Kingdom was prohibited until 1825, when it was allowed, on payment of a duty which ranges from 20 to 40 per cent., according to circumstances. The effect of this measure was to create a considerable competition between our manufacturers and those of France, and an improvement both in the quality and economy of the gloves made by the former. As a great increase also occurred at the same time in the importation of foreign goat, kid, and lamb skins, it may be inferred that the impetus produced by the change was likewise productive of a considerable augmentation in the quantity of leather gloves of home manufacture, although more recently this branch of the trade has received a check from the increased use of cotton gloves, especially the Berlin kind.

The quantity of leather gloves imported in a legal manner, at present averages about 1,200,000 pairs a-year, brought almost wholly from France, and yielding about £23,000 of duty. This, however, is much short of the actual importation, as the existing duties are still so high as to lead to a considerable smuggling trade, which Mr M'Gregor states can be conducted for a charge upon the fine gloves of only nine per cent. "I consider," says that gentleman, "that if the duty were reduced one-half upon its present amount, the actual consumption of gloves would not be much greater than it is at present, but that it would tend nearly altogether to stop smuggling" (*Par. Report on Import Duties*, p. 12). Again, on being asked by the committee what advantages the French possessed over the English in producing gloves, he states, "The only advantages the French can have over the English in producing gloves are, first, that they have some method of preparing leather which is considered superior to ours, and the other is the price of labour; these, with greater skill and thrift, can be the only advantages. (*Ibid.* p. 13.) [SKINS.]

Leather gloves must be imported in packages, each of which shall contain 100 dozen pairs of such gloves, and in ships of 70 tons burden or upwards, under penalty of forfeiture. (3 & 4 Wm. IV. c. 52, § 58.)

Cotton, woollen, and linen gloves are to be admitted to entry at the *ad valorem* duties chargeable on cotton, woollen, and linen manufactures respectively. (*Treas. O.* Dec. 3, 1830.)

GLUE (Fr. *Colle.* Ger. *Leim*), a well-known commodity employed for cementing wood. It is extracted from refuse animal substances, and differs in quality according to the materials employed; the best being obtained from the skins of old animals. It generally occurs in square cakes, and when good, is hard and brittle, of a semi-transparent and deep brown colour, and free from clouds and spots. That which is soluble in cold water is weak. The parings of hides, pelts from furriers, the hoofs and ears of horses, oxen, calves, and sheep, are largely imported for its manufacture.

GOAT, a well-known quadruped (*Capra*), nearly the size of the sheep, to which it is allied, but stronger, less timid, and more agile; and having horns, hollow, erect, and scabrous. Species of this animal are found in many parts of the world, but that which is domesticated in Europe (*C. Hircus*) is perhaps peculiar to this quarter of the globe. In most parts of the United Kingdom it is kept rather as a pet than for use; and even in Wales, where it was formerly plentiful, it is now comparatively rare, except in Glamorganshire, where some still exist in a wild state. In the S. of Europe, particularly Spain and Italy, goats are more extensively reared, and flocks of them are very common. The animal is not long lived. Its young are brought forth in March or April, and two are commonly produced at a birth. It feeds on the coarsest herbage, delights to frequent rocks and mountains, and may be reared profitably in such districts as will not carry sheep. Its flesh is esteemed as food in the countries where it abounds, and the haunches are frequently salted and dried; the female is in request for her milk; the horns are useful for knife-handles; and superior candles may be made of the suet; but the part most valued is the skin, particularly that of the kid, which is extensively used in the glove manufacture. In the age of wigs, the hair of the goat was in great request, and even yet the pure white wigs sometimes worn by lawyers and clergymen are made of it,—the long thick hair on the haunches being that generally preferred.

The *Angora Goat*, inhabiting the district around Angora and Beibazar, in Asiatic Turkey, is in high estimation for its soft and silky hair. The *Cashmere* or *Thibet Goat*, is a small beautiful creature, greatly valued for a delicate wool procured from between its long hairs. [SHAWLS.] Attempts have been made to acclimatize this animal in Europe; and some success has attended the introduction into France of a Tartar half-breed which had been found to thrive in a colder climate. More lately (1836), a cross is said to have been obtained, at Frankfort on the Maine, between the Thibet goat and Merino sheep; but the fruitfulness of the hybrid progeny, and success of the experiment in a commercial point of view, have not yet been ascertained.

GOGUL, a species of bitumen much used in India for painting the bottoms of ships.

GOLD (Dan. *Guld.* Du. *Goud.* Fr. *Or.* Ger. *Gold.* It. *Oro.* Por. *Oiro, Ouro.* Rus. *Soloto.* Sp. *Oro.* Sw. *Guld.* Arab. *Tibr*), a beautiful metal, of a deep and peculiar yellow colour. It exceeds all others in ductility and malleability. It may be beaten into leaves 1-282,000th of an inch in thickness, and a single grain may be drawn out into 500 feet of wire. Sp. gr. 19·3. Fusing point, 2016° Fahr. Gold is not acted upon by any solvent except *aqua regia*, a mixture of muriatic and nitric acids. It is unchanged by fire with access of air,—the hottest furnace producing no other effect upon it than to keep it in fusion, when it appears of a brilliant greenish colour. It, however, contracts more than any other metal in cooling. The uses of gold are numerous. Alloyed with copper or silver it is employed for coin, plate, and a variety of articles of luxury and ornament, for which purposes it is in the highest request, from its great beauty, unchangeableness, and lustre, In the arts it is extensively used for gilding. Gold is found in the native state, in combination with silver, and often mixed with metallic sulphurets and arseniurets. It occurs in greater or less abundance in almost every part of the globe. It is obtained chiefly in the form of a fine sand from the Peruvian, Mexican, and Brazilian rivers, and from some of the African: in Europe, the Danube, the Rhine, the Rhone, and the streams of Hungary and Transylvania, afford small quantities. It also occurs in mineral veins in primitive mountains, but not of the oldest formation: it is thus found in Brazil, Peru, Mexico, Hungary, and Transylvania. It has been also found in grains and rounded masses in soils, evidently the ruin of rocks, which contained it in its natural situation; in this state it occurs on the coast of California, in Wicklow in Ireland, and in Cornwall. Of late years considerable quantities have been obtained in the Ural Mountains in Russia, in North and South Carolina, and in the adjoining Atlantic tracts of the United States. [Bullion. Coin. Plate.]

GOMUTI. [Ejoo.]

GOODS, a general name for moveables, but usually restricted to merchandise.

GOOSE. [Poultry.]

GOOSEBERRY, the well-known fruit of a bush (*Ribes Grossularia*) abundant in this country, alike in the garden of the nobleman and of the cottager. The catalogue of the Horticultural Society enumerates 200 kinds, but all prefer the temperate climates, with an inclination rather towards the cold than the warm. Hence the flavour of the Scotch berries is much superior to that of those produced in any part of England. In size and appearance, however, the gooseberries of Lancashire are said to be unequalled by any in the world; and there, as well as in Cheshire, Staffordshire, and Warwickshire, striking improvements have been introduced into the cultivation of this cheap and agreeable fruit.

GRACE. [Days of Grace.]

GRAM, in oriental commerce, a name given to the produce of various leguminous plants cultivated in India.

GRAMME, the unit of the French measures of weight, is equivalent to a cubic centimetre of pure water, or 15·434 troy grains.

GRANILLA, the dust or small fragments of the cochineal insect.

GRAPES (Fr. *Raisins*. Ger. *Trauben*. It. *Grappi*, *Grappoli*. Por. *Uvas*. Sp. *Ubas*), the fruit of the grape-vine (*Vitis vinifera*), a tree with long slender branches, generally found indigenous in countries lying between 26° and 44° N. lat., and between 26° and 75° E. long., but the growth of which in the open air has been extended by cultivation 10° on each side of that range. This fruit is made an object of attention chiefly in the countries of the S. of Europe, although in none have grapes been produced equal to those of Syria, as regards the size of the berries and weight of the branches. Grapes are chiefly used in the manufacture of wine, but they are also extensively consumed as food, and in this country are a common article of the dessert. For the latter purpose they are mostly imported in a dried state [Raisins] from Spain and Turkey; while a small kind, much used in puddings [Currants], are brought from the Ionian islands and Greece. A considerable quantity of undried grapes are also imported, principally from Portugal, in jars. In Great Britain, they are grown for the dessert in hot-houses, except in the counties of the S. of England, where some species thrive in the open air. In former times, indeed, wine was largely made in those districts, from the grape; and in Devonshire there are reported to be still two or three vineyards maintained for that purpose.

GREAT BRITAIN. [United Kingdom of Great Britain and Ireland.]

GREECE, a kingdom in the S. W. extremity of Europe, lying between lat. 36° 16′ and 39° 34′ N., and long. 20° 43′ and 26° 28′ E. It comprises Continental Greece, naturally divided by the Isthmus of Corinth into two portions, Hellas (called also E. and W. Greece), and the Morea, with the island of Eubœa, the Cyclades, and the N. and W. Sporades. It is surrounded by the Mediterranean, except on the N., where the continental part is bounded by Turkey. Area, 15,000 square miles. Population estimated at 900,000. The whole was divided in 1833 into 10 nomarchies (*nomoi*), which were subdivided into 54 eparchies, and these again into 468 parishes (*demoi*). Capital, Athens; pop. 17,000. Government, a hereditary monarchy, nearly absolute.

The surface of the kingdom is in general mountainous, and the only extensive level tracts are in W. Hellas, and on the northern shores of the Morea; these, with small plains scattered through E. Greece, are the most productive districts. The climate is for the most part healthy, except in the marshy tracts adjoining the coast and lakes; and in the plains the medium temperature of the year is about 60° Fahr. About 3-4ths of the surface belong to the state and to the church, and the rest to individuals; but only about 1-10th part is cultivated, the country being more pastoral than agricultural. The vegetable products have a great similarity to those of the S. of Italy. Hellas possesses the best corn districts, the richest being perhaps Bœotia, though the wheat of the Morea is that in highest repute; but the supply being insufficient for the consumption, large quantities are imported. The olive and currant-grape are also cultivated extensively. The mineral products are numerous, but only an insignificant quantity of any of them is obtained at present, except copper and salt, which last is procured in abundance in the lagoons near Missolonghi and elsewhere. The manufactures are mostly domestic, and quite inconsiderable.

Greece is indeed naturally adapted for being a commercial rather than an agricultural or manufacturing state; and though none of the rivers are navigable, and there are few roads, these are rendered less necessary than in most other countries, by the numerous bays and inlets on the coast, along which, as well as between the various islands, there is a perpetual intercourse. To this is in a great measure to be attributed the maritime habits of the Greeks, and the extent of their mercantile navy, which, including small craft, amounts to about 4500 vessels, navigated by nearly 16,000 frugal, active, and hardy seamen. This is exclusive of about 5000 men in the service of Turkey and Egypt. Most of the large vessels are engaged in the carrying trade between the ports of the Mediterranean and the Black Sea.

The exports consist of raw silk, currants, wool, oil, copper, wine, wax, mastic, and a variety of other articles; the imports principally of corn, cotton, silk and woollen manufactures, sugar, and coffee. Nearly the whole foreign trade is centred in the ports of Missolonghi and Galaxidi, on the W. coast of Hellas; Piræus (the port of Athens), on the E. coast of Hellas; Nauplia, Patras, and Corinth, in the Morea; and Syra, Hydra, and Spezzia, in the respective islands of these names. Of these the chief are the following:—

Patras, on the N. coast of the Morea, is situated about 6 miles S. W. of the entrance of the Gulf of Lepanto, in lat. 38° 14′ N., long. 21° 44′ E.; pop. 8000. It was formerly the emporium of the trade of the Morea, as well as that of W. Greece; but the town was ruined during the war of the Revolution, and its prosperity has since been only in part restored. Its chief exports are currants, grown in the adjoining plain. About 30,000 tons of shipping enter annually, whereof 6000 are British; the aggregate value of the outward cargoes of the latter is estimated at £160,000.

Napoli di Romania lies on a rocky promontory at the N. E. extremity of the Gulf of Nauplia, in lat. 37° 34′ N., long. 22° 48′ E.; pop. estimated some years ago at 12,000, but now less. The harbour between the promontory and the N. coast is tolerably large and safe, but too shallow to admit large vessels. The town is defended by a small fortified island at the mouth of the harbour, and a strong castle. About 6000 tons of shipping enter annually.

Syra, in lat. 37° 30′ N., long. 24° 55′ E. is advantageously situated in the island of that name. The town is handsome, and covers a conical hill, at the base of which is an excellent port, with docks, warehouses, and lazarettos. Since the decay of Hydra, Syra may be regarded as the principal emporium of the kingdom. In 1837, the number of vessels cleared was 2669; burden, 111,618 tons; value of cargoes, £332,185: And there entered 1438 vessels; burden, 103,598 tons; value of cargoes, £398,057. About one-third of the imports are in British vessels.

MEASURES, WEIGHTS, MONEY, &c.

The Measures and Weights decreed for the use of the kingdom are those of the metrical system of France, but the following are those chiefly in use:—The oke = 2 lbs. 11¼ oz. avoird.; the kilo = 22 okes; and the cantar or quintal = 44 okes, or 119 lbs. avoird. nearly. The strema of land is 40 paces square; and the arpent is 1¼ acre nearly.

Distance is usually computed by the hour, estimated at about 3 miles. Time is reckoned by the old style.

Money.—Accounts are stated in drachmas of 100 centimes. The drachma is a silver coin weighing 69 grains troy, $\frac{9}{10}$ths fine, and equal 8½d. sterling, or nearly $\frac{9}{10}$ths of the French franc; and 28 drachmas, 15 centimes, = £1. There are also silver pieces of 5, ½, and ¼ drachmas. The gold pieces are for 40 and 20 drachmas; the latter weighing 89 grains troy $\frac{9}{10}$ths fine = 14s. 2½d. The copper coins are for 1, 2, 5, and 10 centimes.

In December 1839, an ordinance was issued for the institution of a National Bank.

The Finances were in a miserable condition for some years after the conclusion of the war, and, though now improved, the income is still unequal to the expenditure. In the budget for 1837, the revenue was stated at 12,381,007 drachmas, and the expenditure at 16,447,126 drachmas, leaving a deficit of 4,066,119 drachmas. The expenditure includes 2,801,399 drachmas of interest on the home debt.

The foreign debt consists of three loans contracted in this country, namely, *1st*, £800,000 in 1824, at 59 per cent.; *2d*, £2,000,000 in 1825, at 56½ per cent.; and *3d*, £2,343,750 in 1833. The whole are in bonds bearing interest at 5 per cent.; but no dividend has been paid upon the first since July 1826, nor upon the second since July 1827. The third, being guaranteed by Great Britain, France, and Russia, in equal portions, the interest upon it is paid regularly in London, on 1st March and 1st September; and a certain portion of the bonds (which are in sums for £40 each) are annually redeemed by a sinking fund of 1 per cent.

The Duties on exports average about 3 per cent. *ad valorem*, but none are exacted on olive oil.

A Treaty of Commerce between Great Britain and Greece was concluded October 4, 1837. It provides for equal and reciprocal rights as to shipping and port-duties, and complete toleration and protection to the subjects of the two powers within the dominions of each other respectively. (*Hertslet's Treaties*, vol. v. p. 288.)

Prior to 1820, Greece formed a portion of the Turkish empire, but in that year a revolutionary struggle commenced, which, after many vicissitudes and atrocities, was brought to a termination by the interference of Great Britain, France, and Russia, and in 1829 its independence was acknowledged by the Porte. The government, however, remained disorderly until 1832, when, under the influence of the allied powers, the crown was vested in Otho, a son of the King of Bavaria.

GREENLAND, an extensive island situated between Iceland and the continent of N. America. It is subject to Denmark. Population vaguely estimated at 10,000, all Esquimaux, except about 250 Danish settlers.

The country is described as "a mass of rocks, intermingled with immense blocks of ice." The interior has not been explored by Europeans; nor is any thing known of the E. coast, except that the shore consists almost wholly of one uninterrupted glacier. The west coast, though high, rugged, and barren, is less cold and miserable than the other; and it is here that the Danes have established a few colonies, chiefly commercial and missionary establishments. The most ancient, called Good Hope, in lat. 64° 10′, possesses an excellent harbour. Uppernavic, in lat. 72° 48′, is the most northerly station. The vegetation is scanty, composed chiefly of mosses and lichens, with a few shrubs bearing edible berries. Rein-deer, hares, foxes, white bears, and dogs, exist on shore; but it is aquatic animals that constitute the principal source of wealth. The ordinary food of the natives consists of the caplin and the seal; the skin of the last supplies them also with dress. Whales are likewise common, especially towards the north; and walruses are met with in Davis' Straits. The Danes export from their different settlements train-oil, fish, whalebone, sealskins, fur, and eider-downs, the trade giving employment to about five or six vessels; while the seas within Baffin's Bay and Davis' Straits are frequented by vessels from most of the maritime states for the prosecution of the whale-fishery.

GRINDSTONES, circular stones on which edged instruments are sharpened. They are formed of a species of hard sandstones, known in the N. of England under the name of grindstone-grit. The celebrated "Newcastle grindstones," exported to all parts of the world, are obtained from the quarries of Gateshead Fell, in the county of Durham; but the stones chiefly used in Sheffield are procured at Wickersley, in Yorkshire.

GROAT, an English silver coin, equivalent to four pennies, first minted in the reign of Edward I.

GROSCHE, a small silver coin and money of account in various parts of Germany, equivalent to nearly 1½d. sterling.

GROS DE NAPLES, a plain silken fabric made of stouter and harder thrown organzine silk than sarsnet or persian, and woven with more care and labour.

GROS DES INDES, a silken fabric having a stripe formed transversely to its length.

GROSS, in numeration, signifies twelve dozen. *Gross-weight* is the weight of merchandise including the package and dross around it.

GROUNDAGE, a duty payable in some places by ships coming to anchor.

GUACHAPELI-WOOD, the name given to a strong species of timber, the product of a tree found in Colombia. It is largely exported from Guayaquil.

GUAIAC, OR GUM GUAIACUM, is a resinous substance obtained in various ways from the guaiacum tree. It occurs in large amorphous hard pieces, with bits of bark sometimes adhering to them. It is of a friable texture, and naturally of a reddish-brown colour, but from the action of the air, the surface is generally of a deep greenish colour; it has a pungent acrid taste, but little or no smell, unless when heated. Sp. gr. 1·23. Those pieces are to be preferred which have slips of the bark adhering to them, and that easily separate from it by a quick blow. It is an article of the materia medica.

GUAIACUM, OR LIGNUM VITÆ (Fr. *Gayac*. Ger. *Pockhaln*. Sp. *Guayaco*), a tree which grows to a great size in Jamaica, Hayti, and other West India islands. Its timber is resinous, colour greenish-black, taste acrid, and when kindled it gives out a pleasant odour. It is very hard; sp. gr. 1·333, being heavier than water, and indeed the weightiest timber known, and the most difficult to work. It is well adapted for stampers and mallets, for friction-rollers, castors, and turnery-ware; also for the sheaves or pulleys of blocks, a purpose for which it is much used; and its application may be seen upon a grand scale in the beautiful block-machinery at Portsmouth. A decoction of the capsules, wood, or bark, is also used in medicine.

GUANO, a highly concentrated manure, is a dark yellow substance, of a strong ambrosial odour, found in deposits 50 or 60 feet thick, and of considerable extent, upon the coasts of Peru, the islands of Chinche, near Pisco, and other places more to the south. It is said to be an accumulation of the excrements of herons, flamands, and other birds inhabiting these localities. This substance has of late become an object of considerable trade.

GUARANTY (or as it is generally but loosely called GUARANTEE), is an engagement to perform some act, or pay some debt, in case another person primarily liable fails to do so. In England, the term is generally used to express the contract of suretyship, whether for the payment of money or the performance of other obligations. In Scotland, a distinction is taken between what is termed a "cautionary obligation," and a guaranty or letter of credit, the former being a regular contract indigenous to the Scottish jurisprudence, while the latter was introduced from the English law by the progress of commerce. "It [guaranty] is distinguished from a formal cautionary obligation," says Professor Bell, "chiefly by the looser epistolary form of the writing," and the chief practical distinction seems to be in the privileges accruing to the formalities employed in giving expression to the latter. [CAUTIONARY OBLIGATION.] In England, guaranty is affected by the 4th section of the statute of frauds (29 Chas. II. c. 3), which enacts, "That no action shall be brought . . . . whereby to charge the defendant upon any special promise to answer for the debt, default, or miscarriage of another person . . . . unless the agreement upon which such action shall be brought, or some memorandum or note thereof, shall be in writing, and signed by the party to be charged therewith, or some other person thereunto by him lawfully authorized." Where a person has used expressions which bind himself in the first instance, and not merely on failure of another, the agreement does not come within the statute, nor does it, where the promise is to pay, not in the event of another failing to do so, but in consideration of the creditor performing some act which may be held a consideration between the creditor and the person who promises; as, abandoning a lien or security. Money paid or lodged in court, in fulfilment of a verbal guaranty, cannot however be recovered. There is no statutory provision resembling the statute of frauds applicable to Scotland; but "in Scotland the rule is, that no cautionary obligation or guarantee can be constituted by parole agreement; so that an acknowledgment or a reference to oath will not constitute an effectual guarantee. But this is not carried so far as, in England, the words of the statute have compelled the courts to go: If goods be furnished, or money paid, or indulgence given from the immediate execution of diligence, on the faith of the engagement, though verbal, and with the knowledge of the person so engaging, the obligation will be effectual by the law of Scotland." (*Bell's Com.* I. 371.)

By another doctrine peculiar to the law of England, the use of the term "agreement," in the above-cited section of the statute of frauds, renders it necessary that there should be a "consideration" appearing on the face of the writing [CONTRACT]. A consideration to this effect will consist in the creditor doing some act which, but for the guaranty, he would not have done. "It is enough," says Chief Justice Best, "if the person for whom the guarantor becomes security receives a benefit, or the person to whom the guaranty is given suffers inconvenience, as an inducement to the surety to become guarantee for the principal debtor" (Morley *v.* Boothby, 3 *Bing.* 113). Where the guaranty refers to future transactions, a simple reference to them will express a sufficient consideration; thus, "I guarantee the payment of any goods which A shall deliver to B," is sufficient, because A will have given a consideration before the time when the guaranty is intended to be effectual. But the following, "to the amount of £100, consider me as a security on J G's account," was void, as not expressing any consideration. "But where the agreement is *retrospective*, and refers to a *past* consideration, which it, however, states to have been *moved by an antecedent request*, from the guarantor, there it will be sufficient; for such a consideration would be sufficient at common law to support a promise, and the statute of frauds has made no alteration whatever with regard to the sufficiency of the consideration, but only requires that it should be in writing." (*Smith's Mercantile L.* 383, 384.)

In construing guaranties, the expressions are allowed to bear their full meaning against the surety, but he cannot be held to have bound himself by implication farther than he expresses himself. The terms must be strictly complied with on the part of the person who takes the surety; and so where the guaranty contained a condition that 18 months' credit should be given, the taker, after having granted but 12 months' credit, was not allowed, after the additional 6 months, to come upon the guarantor (Bacon *v.* Chesney, 1 *Starkie, N. P. C.* 192). The taker is bound to inform the surety of the nature of the contract, and a fraudulent concealment will vitiate the guaranty—this was held where one guaranteed the payment of £200 value, to be delivered in pig iron, and there was a private agreement that besides the market-price of the iron, 10s. per ton should be paid towards the extinction of an old debt (Pidcock *v.* Bishop, 3 *Barn. & Cress.* 605). Whether a guaranty is general and continuous, and to be held to cover the balance on a series of transactions, or is only applicable to one transaction, is a question which must be determined by the expressions used, and is often one of extreme nicety. On the one side, courts will not allow a dealer to reimburse himself by means of a guaranty evidently intended to apply to only one transaction, for losses on a general balance incurred in dealings originally undertaken at his own risk; while, on the other hand, they will not protect the person who grants such a general engagement as justifies a trader in continuing to rely on it, from the consequences. "If a party," said Lord Ellenborough, "means to be surety only for a single dealing, he should take care to say so." And he decided that the introduction of the words "any debts," though the amount was limited, made the guaranty continuous (Merle *v.* Wells, 1810, 2 *Camp.* 413). Where a particular transaction is specified, or distinctly connected with the guaranty (as in the case of its accompanying an order of goods to the amount guaranteed), the natural interpretation will be that the guaranty is not continuous. A guaranty will not have a retrospective effect, unless it be so expressed; but where one offered to purchase goods, which would not be delivered without a respectable reference, and next day brought a letter stating that if such goods as the purchaser wished to buy were supplied, the defendant would guarantee the payment, not exceeding £50, he was held responsible for the price of the goods bought but not delivered (Simmons *v.* Keating, 1819; 2 *Starkie*, 426).

In Scotland, a species of guaranty may be raised by the conduct of the grantor out of a mere letter of recommendation. A simple recommendation is not held to bind the grantor; but if it contains fraudulent and false information, to which the person to whom it is addressed has given credit, and has thereby been deceived, the writer is responsible as for a guaranty. Thus, where A wrote to B of a man whom he knew to be merely a labourer, saying "he had requested my line to somebody in the trade in Glasgow: and if you and he can agree as to the price, I have no doubt of your dealing to a considerable extent," he was held responsible (Corbet *agt.* Gray, 27th February 1794; *B. C.* I. 372). Independently of false information, a recommendation may be interpreted as a guaranty if it refer to any particular transaction, or to the credit of the party. Thus, where a letter introduced an individual "as intending to open for a sale of spirits and ale at the term," and continued, "the lad has always behaved with propriety hitherto, and I doubt not will give satisfaction in any transactions he may have with you," the first part was held as a mere introduction, but the latter as a guaranty (Ranken *agt.* Murray, 15th May 1812; *F. C.*). Where the recommendation is given in answer to inquiries by the person who acts on it, the expressions are interpreted more widely, and in favour of the writer.

A guaranty is discharged by the creditor giving the debtor time, or "extending the period at which, by the contract between them, the principal debtor was originally liable to pay the creditor, and extending it by a new and valid contract between the creditor and principal debtor, to which the surety does not assent" (Howell *v.* Jones; 1 *Cr. M. & R.* 107). This principle will operate where credit is given, beyond what has been usual in the course of dealing between the parties, but not in the case of mere forbearance. *Laches* or negligence will discharge the guaranty—neglect of notice of dishonour of a bill of exchange, payment of which is guaranteed, may be adduced as an example. When the surety has been brought under liability to pay, he has recourse against the principal. In equity he is entitled to be substituted to the creditor on any security charged with the principal debt. "Nay, it appears, that if the surety be under a disability, which prevents him from obtaining, in his own person, the benefit of securities which have been set apart for the creditor, equity will restrain the creditor from proceeding against the surety till he has resorted to those securities; though such circumstances would furnish no defence at law. And where the principal has assigned his effects to a trustee for his creditors, a creditor who has a guaranty will be forced, even at law, to apply, in discharge thereof, a rateable part of any payment he may receive from the trustee." (*Smith's Mercantile L.*, 389.)

Each surety, where there are more than one, has a right to reimbursement from his co-sureties. This right is called the right of contribution. It is not affected by the questions,—whether the sureties bound themselves jointly and severally by one instrument, or by several instruments, and whether or not they were aware of each other's engagements. By common law, the contribution is according to numbers, but equity has regard to the insolvency of any of the sureties. "Thus, if A, B, and C, be co-sureties, A, having paid the debt, would be entitled to recover *at law* a third only from B, though C may have become insolvent; whereas, *in equity*, he will be entitled to one-half. But both in law and equity, if he have been reimbursed in part, the contribution must be calculated on the residue. And, it is said, that where one surety becomes so at the instance of another, that other cannot call on him for contribution" (*Smith's Mercantile L.*, 390). As to recourse on the principal debtor and co-sureties in Scotland, see Cautionary Obligations. (*Fell on Guaranties. Pitman on Principal and Surety. Smith's Mercantile L.* ut supra. *Morton on Vendors and Purchasers*, 377-393. *Bell's Com.* ut supra.)

GUATIMALA. [Central America.]

GUERNSEY. [Jersey.]

GUIANA, or GUYANA, the name formerly given to the north-eastern portion of S. America, lying between the rivers Orinoco and Amazon; but as about five-sixths of this territory have been included within Brazil and Venezuela, the term is now generally applied to the remaining part, comprehending the settlements of Great Britain, Holland, and France.

GUIANA (BRITISH), the most westerly portion of this territory, extends, as claimed by our government, from lat. 0° 40′ to 8° 40′ N., and from long. 57° to 61° W.; and includes the former Dutch settlements of Berbice, Demerara, and Essequibo. It is bounded N. and N. E. for nearly 350 miles by the Atlantic; W. Venezuela; S. Brazil; and E. Dutch Guiana, from which it is separated by the river Corentyn. Area about 75,000 square miles; of which, however, considerable portions are claimed by Brazil and Venezuela. Population in 1840 estimated, exclusive of American aborigines, at 98,000; the number of whites being about 4000, partly of Dutch descent, and the rest negroes and mixed races. The government is vested in a governor, and a "Court of Policy," consisting, besides that officer and his secretary, of the chief-justice, attorney-general, collector of customs, and five unofficial persons selected by the college of electors. All laws are enacted by the governor and this court, except the "Annual Tax Ordinance," the privilege of discussing and voting which is vested in the "Combined Court," a body which includes the governor, Court of Policy, and five financial representatives, elected by the inhabitants.

The coast district of Guiana consists of an exceedingly rich alluvial flat, composed of strong blue clay, highly impregnated with marine and vegetable matter, the surface of which is on a level with the high water of the ocean; and when the lands are drained, banked, and cultivated, they consolidate, and become fully a foot lower, rendering necessary unremitting attention to the dams and sluices to keep out the sea. This flat extends from about 20 to 50 miles inward, terminating in a range of sand-hills, varying in height from about 50 to 150 feet. Beyond this, little was known of the country until 1835, when it was explored by Mr Schomburgk, and found to consist of a high land which stretches out in undulating plains, rising at some places into eminences. Further S. ranges of hills occur, running N. W. and S. E., the most elevated about 1100 feet, being in lat 5° N. About 70 miles further S., and parallel to the preceding, are the Picaraima Mountains, which, by means of the Concan chain running S. E., are connected with the Sierra Acaray, a densely wooded range forming the S. boundary of Guiana. These successive chains of hills appear to occupy an inconsiderable width, and the plains between them are of great extent.

The climate was formerly very destructive of human life, owing to the pestilential vapours arising from the marshes of the coast, but draining and cultivation have so far altered its character, that it is now deemed one of the healthiest in the W. Indies. The temperature is remarkably uniform; the average heat at Georgetown being, in the shade in summer, 86° Fahr., while in winter it falls only to 82° or 83°. There are usually two wet seasons, a short one in January and February, and a long one commencing with June; but these, under the influence of cultivation, have been greatly altered both as to intensity and duration. The trade winds blow steadily E. and N. E. for about nine months, changing to S. E. and S. in July, August, and September, the unhealthy season.

The vigour and luxuriance of vegetation in Guiana are equalled by few countries in the world. The number of indigenous plants is remarkable; and nearly one-half of the surface is covered by large forest trees, many of which furnish excellent timber; others are used for furniture, or afford dye-wood; and not a few are valued for their fruits, chiefly the banana, pine-apple, and cacao-nut. As yet only a few places on the coast, and on the banks of the rivers Essequibo, Demerara, Berbice, and Corentyn, have been cultivated. The plantations are commonly ranged in allotments, varying from about 500 to 1000 acres each. The dwelling-houses, elevated on piles of timber, as a security against inundation, are generally close to the water-side, with a wharf opposite for the convenience of shipping produce. The value of the public and private property of the colony, moveable and immovable, is stated by Mr Martin at £24,020,000, and of the property annually created, at £3,789,160. In the year 1836, when the colony appears to have attained its acme of prosperity, the quantities of the staple articles produced were, sugar, 107,806,249 lbs.; rum, 2,980,296 gallons; molasses, 4,035,569 gallons; coffee, 5,875,732 lbs.; and cotton, 656,902 lbs.

Of late years a considerable decrease has taken place in the produce of these staples, more especially sugar. This is attributed to various circumstances, but mainly to the aversion to work shown by the emancipated negroes, the number of whom, including children, amounted to 82,824. This cause, as is well known, has influenced the productive power of several of the West India islands; but in Guiana it has been felt with particular severity, owing to the great extent and fertility of the unappropriated lands, from which the blacks can with little labour supply all their wants. At present many of the plantations are lying waste; and Mr Schomburgk lately reported that of 80 estates on the Corentyn, 58 were abandoned. Various attempts have been made to promote emigration into the colony; and in 1839, about 400 Hill Coolies were brought from India, who proved to be good labourers; but there having been reason to believe that this was in fact a revival of the slave-trade, the practice was stopped. More recently, measures have been adopted for the encouragement of voluntary emigration from the coast of Africa and other places; and the resolute energy displayed by the colonists under all their difficulties, afford just grounds for believing that their prosperity will be again restored.

The exports are almost wholly to the United Kingdom; and the following is an account of their amount for the last five years shown in our public accounts:—

	1835.	1836.	1837.	1838.	1839.
Sugar . . . . *cwt.*	886,861	1,077,848	943,388	835,300	566,862
Rum . . . . *galls.*	1,990,656	2,004,588	1,482,129	1,508,946	1,442,550
Molasses . . . . *cwt.*	227,007	264,206	299,824	253,477	117,238
Coffee. . . . . *lbs.*	3,166,091	3,467,442	5,118,642	3,799,298	1,673,232
Cotton . . . . *lbs.*	1,140,361	1,080,697	993,388	663,639	551,325
Arrow-root . . . . *lbs.*	9,973	10,009	6,107	6,723	2,220

The other exports are mostly to our colonies in North America and West Indies; those to foreign countries are trifling. The value of the exports in 1836 was estimated at £2,135,379; but in 1839 the value hardly exceeded £1,000,000. The imports consist of cod-fish, wood, and lumber, wheat and rice, from N. America; wine; and British produce and manufactures, including apparel and slops, cotton, linen, woollen, and leather goods, hats, glass, and earthenware, iron, and a variety of other articles; the value of the whole imported into Demerara in 1836 amounting to £770,839, and into Berbice, £140,738; total, £911,577.

The shipping entered inwards in 1836 consisted of 716 vessels, burden 111,425 tons; of which from Great Britain, 66,914 tons; British colonies, 34,526 tons; United States, 7000 tons; foreign, 2985 tons.

The ports of the colony deserving of notice are only two, Georgetown and New Amsterdam.

Georgetown, formerly called Stabroek, the capital and seat of government, is situated on the E. bank of the Demerara, a short distance from its mouth, in lat. 6° 49′ N., and long. 58° 12′ W.; pop. 20,000. The houses, made of wood, are generally two stories high, with porticos and balconies, shaded by a projecting roof. The streets are wide and traversed by canals. Shops and stores are numerous, and European goods plentiful; the markets also are good. There are likewise many commodious warehouses and wharfs; but the latter can be safely approached only by small craft, on account of the declivity of the bank, and the ebbing of the tide, the rise of which on the coast is from 16 to 24 feet. Vessels not drawing more than 14 feet, load and discharge their cargoes in the middle of the stream; but those of greater draught cannot enter the river, owing to a bar at its mouth, and must therefore complete their loading outside. Within a mile of the town, near the mouth of the Demerara, is a small mud-fort, called Fort William Frederick. The town being the depôt of the produce of the countries adjacent to the Essequibo and Demerara, its commerce is considerable.

New Amsterdam lies in lat. 6° 15′ N., and long. 57° 21′ W. at the confluence of the river Canjee with the Berbice, near the entrance of the latter into the sea, and about 57 miles E. of the Demerara; pop. 3000. The coast here is encumbered with shallows, and the harbour, though good, is difficult of access. From this town is exported the produce of the plantations on the rivers Berbice and Corentyn. Vessels drawing 14 feet may, it is said, sail 200 miles up the Berbice, while the Canjee is navigable 50 miles for schooners. The entrance of the former is protected by three batteries.

MEASURES, WEIGHTS, MONEY, FINANCES, &c.

The Measures and Weights are chiefly British. The Dutch ell of 26 inches = 27 Imp. inches; and 110 lbs. Dutch = 100 lbs. avoirdupois.

Money.—The monetary unit is now the dollar, divided into 100 cents, and represented by Mexican dollars and others of the standard weight. The currency is composed of bank notes, dollars, and British coins, principally silver. Gold doubloons are sometimes met with, especially when the exchange is low, when they are sent from Barbadoes and other W. I. islands to purchase bills on England.

Prior to 1840, the integer of account was the florin or guilder, of 20 stivers, each of 16 pennings; which, at the usual exchange of 14 florins per £1, was worth about 1s. 5d. A government paper money, formerly issued, was lately called in, and exchanged for dollars.

The British Guiana Bank, incorporated in 1836, and the Colonial Bank, have establishments in Georgetown and New Amsterdam; and issue notes for $5, $10, and $20 each, payable in silver.

Finances.—In 1836, the revenue of Demerara and Essequibo was £87,885, and of Berbice, £18,196; total, £106,081: the expenditure of the two former, £97,371; of the latter, £16,575; total, £113,946. The expense incurred by Great Britain for military protection in the same year was £45,421.

Duties.—The export rates and duties on produce are trifling. The general colonial duty on imports is 2 per cent. *ad valorem*. The crown duties, levied only on foreign goods, are described under the head COLONIES.

Guiana is by some said to have been discovered by Columbus in 1498; according to others, that honour is due to Vasco Nunez in 1504. In 1590, the Dutch settled on the Demerara; and in 1634, the English formed settlements in Surinam and the neighbourhood, which, however, were given up to the Dutch in 1667. In 1796, the settlements of Demerara and Essequibo were surrendered by Holland to Great Britain; in 1802, they were restored; but in 1803 were retaken, and have ever since been retained. Surinam, which had likewise been captured by the British, was given up in 1814. Previous to 1831, our possessions were divided into three colonies, Essequibo, Demerara, and Berbice; but in that year they were united under one government called British Guiana. In 1838, the slaves were emancipated.

GUIANA (DUTCH), OR SURINAM, a colony partly the property of the city of Amsterdam, extends along the coast about 200 miles, from the Corentyn river to the Marony; and between them to their sources, supposed to be in the Sierra Acaray. Area about 30,000 sq. miles. Population, exclusive of Indians and Maroons, 60,000; comprising between 6000 and 7000 whites, partly Jews and French, and upwards of 50,000 negroes. The seat of the governor is at the fortress of Zelandia, near Paramaribo; he is assisted in his administration by a high council.

The physical character of the coast is similar to that of British Guiana; but the interior, in which there is a kind of political society formed of maroons or runaway negroes, has not been surveyed. The settlements and plantations are chiefly along the coast, and on the banks of the rivers Surinam and Sarameca. The chief products are sugar, 25,000,000 lbs., and coffee, the annual export of which is estimated at 4,000,000 lbs.; the others are cocoa, cotton, rice, cassava, yams, timber, gums, and drugs. The chief intercourse is with Holland; provisions are obtained from the United States, in exchange for rum and syrup; and a smuggling trade is carried on with Venezuela.

Paramaribo, the capital, chief port, and commercial emporium of the colony, is situated on the W. bank of the Surinam, 18 miles from its mouth, in lat. 5° 40′ N., long. 55° 25′ W. It is built in the Dutch style, with wooden houses, and wide straight streets planted with orange trees; pop. 20,000. It maintains an active intercourse with Holland.

Measures and Weights, those of Holland, but chiefly according to the old system.
Money.—Accounts are stated in florins or guilders of 100 cents, Netherlands currency.

GUIANA (FRENCH), OR CAYENNE, extends about 200 miles along the coast, from the river Marony, which separates it from Dutch Guiana, to the Oyapock, forming its boundary with Brazil. Its interior limits are unknown; but its area is computed at 20,000 sq. miles. Population in 1837, 22,000, including 16,600 slaves. The administration is vested in a governor, assisted by a privy-council of seven official functionaries, and a colonial council of 16 representatives.

The country was first settled by the French in 1604, and, with the exception of a few interruptions during war, it has ever since been possessed by them. The settlements are neither so large nor so numerous as in British or Dutch Guiana; the plantations are chiefly on the island Cayenne, and there are a few on the adjoining coast and the banks of the Organabo: the remainder of the country is still possessed by the Indians. Besides the staples noticed under the preceding heads, the French have transplanted the pepper-vine, clove, and nutmeg trees, from the Indian Archipelago, and the first two, especially the clove, are said to thrive well. In 1836, the exports were as follow:—sugar, 4,960,924 lbs.; molasses, 1,036,283 lbs.; rum, 12,765 gallons: cocoa, 74,964 lbs.; coffee, 41,892 lbs.; cloves, 183,000 lbs.; pepper, 63,941 lbs.; cotton, 566,654 lbs.; arnatto, 639,408 lbs.; besides wood for cabinet-making, vanilla, indigo, and tobacco, and a variety of other articles; the total value being £125,000, nearly the whole of which is shipped for France or her colonies. The imports were about the same value, only one-sixth being from foreign countries. From 60 to 70 vessels enter annually.

Cayenne, the chief town and port, lies on the N. side of the island of that name, at the mouth of the river Ozapoh, in lat. 4° 57′ N., long. 52° 20′ W.; pop. 5000. The harbour is shallow, but vessels can ride in security in the roadstead.
Measures, Weights, and Money, same as FRANCE.

GUILD, a name given anciently to those commercial associations, or fraternities of particular trades, which were common in many of the towns. In their greatest prosperity, these companies, more especially in the metropolis, became important bodies, in which nearly the whole community was enrolled; each had its distinct common-hall and property, and made by-laws for the regulation of its members.

GUILDER. [FLORIN.]

GUINEA, the principal gold coin of the United Kingdom until the introduction of the sovereign. It was so called from having been first coined out of gold brought from the Guinea coast by the Royal African Company; these are generally distinguished by an elephant under the head, or a castle. [COIN.]

GUINEA COAST. [NIGRITIA.]

GUM. Under this term are included several modifications of a distinct proximate principle of vegetables. To some of these the term *mucilage* is occasionally applied; and all the varieties may be referred to one or other of these species,—gum-arabic furnishing a characteristic specimen of gum, and tragacanth or gum-dragon of mucilage. Gum exudes in a liquid state from certain species of trees, and becomes hard by exposure to the air. It is insoluble in alcohol, but extremely soluble in water, being exactly opposed in this respect to the *resins*. On the application of heat it swells and softens; it is infusible. Gum, from its adhesive quality, is extensively used in the arts. In calico-printing it is largely employed to give a proper consistency to the cloth, previously to the application of the mordants. The gums which usually occur in commerce are, Gum-arabic, Gum-Senegal, and Tragacanth or Gum-dragon.

The term gum has likewise, of late years, been applied to several artificial products. The chief of these, *British gum*, a substance obtained by roasting starch, is often used as a substitute for gum-arabic in calico-printing, and for stiffening different goods. Other kinds have been extracted from the seed of the carob tree, commonly called St John's bread; and from several species of lichens indigenous to this country.

GUM-RESIN. The resins, as they exude from trees, are often mixed with gum, when they form *gum-resins*. These substances are in their properties intermediate to resins and gum, and are not therefore to be considered distinct vegetable principles. They are not entirely soluble in water or in alcohol, but proof spirit dissolves the greater part of them. They also readily dissolve in alkaline solutions when assisted by heat; and the acids act upon them nearly as upon the resins. To this class belong ammoniacum, gamboge, assafœtida, olibanum, aloes, myrrh, opium, and others.

GUM-ARABIC (Fr. *Gomme Arabique*. Ger. *Arabische gummi*. It. *Gomma Arabica*. Arab. *Samagh Arebee*,) is obtained from the Egyptian acacia (*Acacia nilotica* or *vera*,) a tree indigenous to Arabia, but found abundantly in Africa. It consists of rounded pieces or tears of various sizes. When pure it is brittle, transparent, colourless, tasteless, and inodorous; but it usually occurs of a pale yellowish or brownish colour. Sp. gr. about 1·4. The pieces which are most transparent, and have least colour, are sometimes selected from the gum-arabic in sorts, and sold for about double the price, under the name of picked gum. Gum-arabic dissolved in water yields a viscid mucilaginous solution which is much employed in the arts. "This solution is sometimes used as a glaze or varnish, and to give a gloss and stiffness to ribands, calico, &c. When substances in a state of minute mechanical division are suspended in it, it prevents their subsidence; hence, its employment as an ingredient of writing ink, and of some paints" (*Brande's Chemistry*). It is also used in medicine.

Gum-arabic is imported direct from Barbary, the Levant, and the East Indies, and at second hand from other places. The best is called Turkey gum-arabic; the worst is the East Indian, which is, indeed, a spurious substance, the greater part of it being obtained from the *Feronia Elephantum*, and found generally in stalactical fragments. About 25,000 cwts. are annually imported, two-thirds of which are entered for home consumption.

GUM-SENEGAL, procured from a species of *Acacia*, is similar to gum-arabic, but in longer and darker-coloured pieces, and of inferior quality. It is used for all purposes to which gum-arabic is employed, more particularly calico printing and dyeing. It is brought from Senegal and Barbary; and between 30,000 and 40,000 cwts. are annually imported; the quantity entered for home consumption being about 25,000 cwts.

GUN. The principal seat of the manufacture of small arms in this country is Birmingham, where it was introduced so early as the reign of William III.; and since that period it has been gradually but greatly increasing. During last war, the public contract for muskets alone extended upon an average to 360,000 a-year; and in the fifteen years prior to 1828, the number supplied to government and to private traders averaged annually 200,000. In the year 1813, a proof-house was established by act of parliament (53 Geo. III. c. 115), under the conduct of a master, wardens, and trustees, where the fabric of all gun and pistol barrels is tested by a heavy charge; all those which sustain the explosion receive a stamp, to counterfeit which is felony; while severe fines are imposed on those who sell such barrels without the stamp.

Great guns, or cannons, and mortars, are chiefly cast in the public founderies at Woolwich, under the superintendence of the Board of Ordnance; but they are also made on a large scale at the Carron Works in the county of Stirling. Indeed the peculiar variety called a carronade derived its name from having been originally manufactured there.

Firearms form an important item in our list of exports. Our principal rival in this branch of trade is Belgium, from whence they are sent in considerable quantities to America, Egypt, Turkey, Germany, Italy, and Spain. They are chiefly produced at Liege, where about 260,000 muskets and 90,000 pistols are made annually, mostly of inferior quality. A vast number of this description are sent to Brazil for re-exportation to the coast of Africa in exchange for negroes. [GUNPOWDER.]

GUNNY, a strong coarse fabric extensively manufactured in Bengal, chiefly from the fibres of the plant called paat, or bhangee (*Corchorus olitorius*). It is used in making bags or sacks for sugar and other similar commodities; and the bags themselves form a considerable article of export from Calcutta.

GUNPOWDER (Du. *Buskruid*. Fr. *Poudre*. Ger. *Pulver*. It. *Polvere*. Por. *Polvora*. Rus. *Poroch*. Sp. *Polvora*), a composition formed of nitre, sulphur, and charcoal, finely powdered, and very accurately blended. The usual proportions per cent. in this country are as follow:—

	Common Powder.	Government Powder.	Shooting Powder.	Shooting Powder.	Miners' Powder.
Nitre	75	75	78	76	65
Charcoal	12½	15	12	15	15
Sulphur	12½	10	10	9	20

The proportions of commercial powder, however, vary indefinitely, according to the views of the manufacturer respecting markets and prices. The nitre being the only expensive ingredient, the proportion of this is diminished, and those of the other two increased, where cheapness is the leading object. The worst is that made for the Guinea trade; that usually exported to Canada and Turkey is also of inferior quality.

In the manufacture of powder minute attention is paid to the purity of the ingredients: they are mixed together with great caution, and pounded with wooden pestles in water, and formed into a kind of paste. The mixture is granulated or *corned* by being passed through sieves. After this it is glazed in revolving barrels, and then carefully dried. The more minutely the materials are ground, and the more intimately they are mixed, the greater is the explosive power. The strength also depends in a great measure on the drying. When well prepared, the powder, on being exploded on a piece of paper, should leave no residuum : if any particles remain, it shows either that the ingredients have not been pure, or not in proper proportion. The quality, however, is best tested by the *eprouvette*. Gunpowder, if much exposed, absorbs moisture, and it should therefore be kept as much as possible excluded from the air. It is usually packed in barrels, each weighing 100 lbs., half barrels of 50 lbs., or quarter barrels of 25 lbs.

The various uses of gunpowder are too well known to require description. The quantity consumed in this country is immense ; besides which 4,000,000 lbs. are estimated to be exported every year, the greater part of which is sent to the W. coast of Africa. In the public accounts, its exportation is included under the head "arms and ammunition," the annual declared value of the whole being about £400,000, mostly sent to Africa, India, Mexico, Turkey, United States, Australia, and Brazil ; considerable quantities, however, are likewise taken by British America and West Indies, Spain, and Holland.

The manufacture and sale of gunpowder are regulated by different statutes, particularly the 12th Geo. III. c. 61, and 54 Geo. III. c. 159.

No dealer shall keep at one time more than 200 lbs., or if not a dealer, more than 50 lbs. within London or Westminster, or three miles of these cities ; or within any other town, or within one mile thereof ; or within two miles of any of the king's palaces or magazines ; or within half-a-mile of any parish church ; or in any other part of Great Britain except in the usual mills and magazines, on pain of forfeiture, and 2s. per lb. But for the use of any mine or colliery 300 lbs. may be kept, if within 200 yards thereof, and not within any of the above-mentioned limits.

Justices are to license the erection of mills and magazines for keeping unlimited quantities, except within the above limits.

No more than 25 barrels of gunpowder to be carried at one time by land, nor more than 200 barrels by water (except for exportation or coastwise), and the barrels shall be closely joined without iron ; and each shall not contain more than 100 lbs.

No master of any vessel, outward bound from London, shall receive on board, except for the king's service, more than 25 lbs. before her arrival at Blackwall ; and the master of every vessel coming into the Thames shall put on shore, in proper places, all the gunpowder on board exceeding 25 lbs., either before the arrival of such vessel at Blackwall, or after, within 24 hours, if the weather permit, on pain of forfeiture, and 2s. per lb. The Trinity House empowered to appoint searchers.

Gunpowder may not be imported into the United Kingdom without license, such license to be granted for the furnishing of her Majesty's stores only, on pain of forfeiture. Gunpowder may not be warehoused. (3 & 4 Wm. IV. c. 52, §§ 58, 59.)

The early history of gunpowder is involved in obscurity. It is said to have been used from a very remote period in China and India ; but it was unknown in Europe before the latter part of the 13th century. Early in the next century it was applied to the purposes of artillery. Barbour narrates that "crakys of war" were used by Edward III. in his first campaign against the Scots, A. D. 1327 ; and it is known that cannons were used by that monarch at the battle of Cressy, as well as at the siege of Calais in 1346 ; but the ancient war-engines continued to be partially employed in sieges for nearly two centuries afterwards. The use of muskets and other small arms was subsequent to that of cannons ; and down to the end of the reign of Henry VIII., the bow continued to be the principal weapon of the English army. During the reign of Elizabeth, however, an entire change took place, and the use of firearms became general.

GUZ, an oriental measure of length, varying in different places from about 2 to 3 feet.

GYPSUM, a native sulphate of lime, different species of which are found in this and many other countries. The crystals are softish, commonly transparent, and of various colours. A beautiful fibrous variety called *satin gypsum* is found in Derbyshire, applicable to ornamental purposes, such as beads and brooches. *Vulpinite*, or *Marbre di Bergamo*, is a beautiful variety employed in statuary. A pure white species is known under the name of *Alabaster*. A common kind of it is converted into *Paris plaster* or *stucco ;* and in some places where it is abundant it is employed as mortar, and as a top-dressing for grass lands.

H.

HADDOCK, a fish of the cod family (*Morrhua æglefinus*, Cuv.), common throughout the British seas, especially on the E. coast betwixt Yarmouth and the Tyne ; ordinary weight 2 to 4 lbs. Haddocks swim in immense shoals. They spawn in February and March, and are in the best condition for the table in October, November, and December. Those cured at the village of Finnan, near Aberdeen, are held in high estimation.

HAIR (Fr. *Cheveu*, *Crin*. Ger. *Haar*.) Human hair forms an article of some importance in trade, and a considerable quantity is imported, especially from France, for the making of wigs. It is preferred when long, fine, and dark coloured. The hair of the lower animals is applied to different purposes. That of the minever, martin, badger, polecat, and other beasts, is used in the manufacture of hair-pencils; while the coarser hair of the dog, wild boar, hog, and others, is made into brushes. Horse hair is extensively used by the upholsterer, and for fishing-lines, as well as in a variety of the arts. As an object of trade, this is classed into two kinds; the short curly, and the long straight. The former is spun into a cord, and boiled, to give it the tortuous springy form. The latter is woven into a kind of cloth, used for sieves, the damask haircloth of chair-bottoms, and other purposes.

HAKE, a species of cod (*Merlucius vulgaris*, Cuv.) found in the northern seas and Mediterranean. It is abundant on the S. coast of England, in the Bay of Galway, and on the Nymph Bank off Waterford. From January to April is its season for spawning. "It is a coarse fish, not admitted at the tables of the wealthy; but large quantities are annually preserved, both by salting and drying, part of which are exported to Spain." (*Yarrell's British Fishes.*)

HALIFAX. [Nova Scotia.]

HAMBURG, one of the Hanseatic states, is situated near the mouth of the Elbe, between Hanover and Holstein, and comprises the city of that name and adjacent territory, with some islands in the river, and a few parcels of land on the south side of it. Area about 150 square miles. Population nearly 150,000, of which the city contains 128,000, mostly Lutherans, but including a number of Jews. The government is republican; the executive and legislative powers are vested in a senate of 36; but no laws can be made nor taxes imposed without the consent of the *burgerschaffi*, or general body of the citizens, who are represented by three colleges.

The city of Hamburg, the most important commercial emporium of the continent of Europe, is situated in lat. 55° 33′ N., long. 9° 58′ E., on the N. bank of the estuary of the Elbe, and E. bank of the Alster, about 75 miles from the North Sea. It was formerly fortified, but having suffered much during the late war, its ramparts have been since levelled, and converted into public walks. It, however, still resembles most of the old fortified towns of Germany, the streets being in general narrow, dark, and dirty, and the houses commonly of brick, ill-built, and old-fashioned; and though some of the streets in the new town are broad and regular, the appearance of the whole is uninteresting, almost the only enlivening feature being the inner lake of the Alster and the adjoining walks. Hamburg also resembles a Dutch town in being intersected by canals; these are filled by the Elbe and the Alster, and almost all the warehouses are close to them. The city possesses numerous sugar-refineries, breweries, and distilleries; also manufactures of ropes, sailcloth, anchors, hats, soap, cotton, and woollen and linen fabrics, and a variety of other articles; but they are in some respects less prosperous than formerly. The shipping belonging to the port (from 25,000 to 30,000 tons), which is inconsiderable compared with its trade, is mostly employed in transatlantic commerce and in coasting.

The Elbe, in the lower part of its course between Harburg on its left bank, and Hamburg and Altona on its right, is divided into several arms by five large and seven small islands, which however unite again in a single channel at Blankenese, about five miles below Hamburg. The arm opposite to the city, though not large, is deep enough at ordinary tides for vessels drawing 14 feet, and at spring-tides for those drawing 18 feet. There is a kind of inner harbour in the town, formed by an arm of the Elbe, fitted for small craft; but there are no docks nor quays, and ships of moderate size are moored in the river to piles fixed a short distance from the shore; while the largest kind not unfrequently load and discharge their cargoes, by means of lighters, off Cuxhaven, a small town subject to Hamburg, at the mouth of the river, where also quarantine is performed. The tide rises at Hamburg from 5 to 12 feet; and flows for about 20 British miles above it. The scene presented by the Elbe contiguous to the city is in a high degree animating,—a complete forest of ships of all nations, and from every quarter of the globe. The number of sea-going vessels that enter inwards annually is nearly 3000, about one-third being from Great Britain; besides which there are an equal number of river-craft. The port is also frequented by numerous steamers, including regular packets to London, Hull, Hâvre, and Amsterdam.

The immense commerce of Hamburg is produced by the liberal policy it has adopted, trade being here as free as can be desired; and by the situation of the town at the mouth of the Elbe having rendered it the entrepôt for the trade of the populous and industrious districts watered by that river (navigable by barges to Melnick in Bohemia), and the numerous natural and artificial communications with it. Of these last the principal are the connexion with the Oder, partly by the Spree, and with Lubec and the Baltic by means of a canal which joins the Elbe to the Trave. The trade may be said to embrace every thing that can be bought or sold, however costly, or however mean; and the total annual value of the exports and imports is estimated at upwards of £15,000,000. The exports embrace all articles of German produce and manufacture, besides corn, iron, tar, tallow, and many other commodities, brought from the countries adjoining the Baltic, of which Hamburg is also to some extent an emporium. The imports principally consist of tropical produce; wine, brandy, olive-oil, fruit, and other articles from the S. of Europe; and above all of British manufactures.

Of tropical commodities, the principal are sugar and coffee, large quantities of which are brought from Brazil, Cuba, Hayti, and Porto Rico. In 1838, the quantity of the former imported, including also refined sugar (forming about 1-6th of the whole), and syrup, was 97,005,000 lbs., and the quantity imported by way of transit (that is, such as is brought to Hamburg direct, and not exchanged while in the city), 5,953,500 lbs.; coffee, 48,900,000 lbs., and in transit, 8,960,600 lbs. In the same year, there were brought of tobacco, 9,754,000 lbs., and in transit, 3,203,000 lbs.; indigo, 1,582,000 lbs., and in transit, 1,418,600 lbs.; cocoa, 1,505,000 lbs., and in transit, 152,000 lbs.: rice, 8,665,000 lbs., and in transit, 2,434,000 lbs.; cotton, 11,758,000 lbs., and in transit, 6,466,000 lbs.; tea, 1,301,000 lbs., and in transit, 69,200 lbs.; besides large quantities of S. American hides, cigars, ivory, saltpetre, cochineal, rum, and a variety of other articles. The quantity of wine imported in 1838 was 48,940 hhds., and in transit, 15,770 hhds.; olive-oil, 1,105,000 lbs., and in transit, 707,200 lbs.; currants, 2,637,000 lbs., and in transit, 1,755,100 lbs.; raisins, 7,000,000 lbs., and in transit, 4,770,100 lbs.; silk, 120,400 lbs., and in transit, 90,700 lbs.

The trade with the British islands forms a highly important, though scarcely an increasing branch of the commerce of Hamburg. It is not shown separately in the public accounts; but the aggregate of the whole trade of the Hanse Towns with the United Kingdom is given for a series of years in Dr Bowring's "Report on the Prussian Commercial Union" (App. p. 114). Of this by far the greatest portion belongs to Hamburg; that of Bremen being comparatively small, and of Lubec quite trifling. The following are the averages of the amounts for each of the five years, ending 1834 and 1838 respectively:—

	Average of the five years 1829-1833.	Average of the five years 1834-1838.
Official Value of Imports into the United Kingdom......	£1,404,216	£1,548,709
—— Exports from the United Kingdom, viz.		
British Produce and Manufactures.......	8,801,920	8,654,861
Foreign and Colonial Merchandise........	1,687,996	1,827,391
Declared Value of Exports of British Produce and Manufactures....................................	4,358,650	4,665,767

Of British manufactures, nearly one-half now consists of cotton yarn and twist, for the supply of the weavers of Saxony and other parts of Germany; the chief other articles are cotton cloth, woollens, and woollen yarn, iron and hardwares, linen yarn, linen cloth, machinery, and coals. The exports from Hamburg to the United Kingdom consist principally of sheep's wool, and in scarce years, of corn; to which may be added seeds, especially rapeseed, smalts, wines, skins, furs, particularly fitch and martin, bristles, geneva, and some descriptions of cotton and linen goods.

The British trade likewise comprehends the importation into Hamburg of tea, wine, indigo, tobacco, gums, especially shellac, furs, pepper, pimento, cassia, cotton-wool, rum, and other foreign or colonial articles direct from the United Kingdom; besides large quantities of coffee, sugar, and other tropical productions from the places of growth, particularly Brazil; while a considerable portion of the general business of the town is conducted by English residents, of whom there are from 1000 to 1500. In the year 1838, the aggregate burden of the British vessels which arrived amounted to 168,186 tons; of which, steamers from the United Kingdom with general cargoes, 62,046 tons; sailing vessels from do. with general cargoes, 47,161 tons, and with coals, 32,668 tons; from Brazil, 11,570 tons; from other parts of S. America, 299 tons; from West Indies, 3137 tons; from other countries, 3960 tons; and in ballast, chiefly to load for Newfoundland, which receives its salted provisions mostly from this port, 7345 tons.

The corn-trade is a department of considerable importance, Hamburg being, next to Dantzic, the chief entrepôt where the grain of the N. of Europe (including the territory watered by the Elbe) is deposited to wait for the best market. In dear times it is brought from parts so distant as Bohemia; but the principal supply is derived from Holstein and the Lower Elbe, the wheats produced in which being coarse and damp, causes the general average of prices to be lower in the market of Hamburg than in Dantzic, where they are of superior quality. The quantity of wheat exported in the ten years ending 1827 was 675,744 quarters, of which 403,535 quarters were sent to Britain. In the next ten years, ending 1837, the exports of wheat amounted to 1,528,400 qrs.; barley, 255,700 qrs.; rye, 352,200 qrs.; oats, 83,600 qrs.; beans, 31,050 qrs.; pease, 62,750 qrs.; brank, 8900 qrs.; rape-seed, 130,050 qrs. In 1838, the quantity of wheat exported was 277,000 qrs.; of which 220,700 qrs. were conveyed to Britain.

Hamburg is not a member of the Prussian Commercial Union, and it is not thought she will willingly surrender those principles of free trade which have so much contributed to her reputation and prosperity. Still, however, opinions in favour of joining this association are spreading among the merchants and wealthier classes, though not among the citizens, or *burgerschaft*, who have their property mostly invested in warehouses, whose value would be greatly lowered by an adherence to the Union, as it is probable no goods would then be warehoused, except in government bonding stores. On the 31st December 1839, a convention was concluded between Hamburg and the Union, giving several facilities to trade.

MEASURES, WEIGHTS, MONIES, DUTIES, &c.

Measures and Weights.—The ell of 2 feet or 6 palms = 22·58 Imp. inches; the Brabant ell = 27·58 Imp. inches.

The ohm, liquid measure, of 4 ankers, 5 eimers, 20 viertels, 40 stubgen, or 160 quarters = 31·87 Imp. gallons; 6 ohms = 1 fuder; the faas of wine is 4 oxhafts, or 6 tierces.

The wispel, corn measure, of 10 scheffels, 20 faas, or 40 himtens = 29 Imp. bushels; 3 wispels = 1 last of wheat or rye, = 1 stock of barley or oats, = 10⅞ Imp. quarters; and 2 wispels = 1 last of barley or oats = 7¼ Imp. quarters.

The pound consists of 2 marks, 16 ounces, 32 loths, or 128 drachmes; and 100 lbs. = 106·82 lbs. avoird.; the centner of 112 Hamburg lbs., or 8 lisponds = 119·64 lbs. avoird.; 2½ centners = 1 shipfund.

A stone of wool or feathers is 10 Hamburg lbs.; a stone of flax, 20 lbs.; a small tonne of butter, 224 lbs., a great do. 280 lbs.; a quarteel of train oil of 2 tonnes or 64 stubgen is reckoned at 4 centners or 448 lbs. net; and a pipe of oil at 820 lbs.

The mode of estimating the weight and fineness of the precious metals is explained under the head GERMANY.

Money.—Accounts are stated in marks, divided into 16 schillings, each schilling consisting of

12 pfennings; and 3 marks make 1 dollar (or reichsthaler). These denominations are of different values, according as they are reckoned in current money, or in banco.

Current money is composed of the coins in ordinary circulation, and which, as none have been for some time minted in the city, consist of Danish and Hanoverian money, chiefly zweydrittels, silver pieces equivalent to 2-3ds of the old Imp. current dollar, or 2s. 3d. sterling; each of these being reckoned at 31 schillings, makes the current mark equal 1s. 2d. sterling.

Banco, used in wholesale trade and in exchanges, is the money of the Bank of Hamburg, or rather the credits inscribed in its books corresponding to equivalent deposits of silver bullion, which, by means of orders or cheques, are transferred from one party's account to another's in payment of debts,—the bullion being seldom or never withdrawn, except when required for exportation. The silver deposited, which must be 15 loths 12 grains (or 47/48) fine, is received at the nominal rate of 442 schillings, and issued at the rate of 444 schillings, or 27¾ marks banco, for the Cologne mark weight (3606 troy grains) of pure metal,—the difference of 4-9ths per cent. being applied to defray expenses. The value of the mark banco, estimating British Standard silver at 5s. per ounce, is thus 17·57d. sterling, or 1s. 5½d. nearly; making 13 marks banco 10½ sch. = £1 sterling. The agio upon banco, compared to currency, is at this rate 25 per cent., but it is continually varying.

The metallic rate of exchange, or par, is, in London, commonly deduced from the market price of gold. The quotation at Hamburg, Jan. 3, 1840, was 428 mks. bco. for the Cologne mark weight fine, which, estimating British standard gold at £3, 17s. 10½d. per ounce, made the rate 13 mks. bco. 6½ sch. per £1, and the mark bco. equal 1s. 5·9d., or nearly 1s. 6d. sterling.

Exchanges were formerly negotiated in pounds Flemish of 20 schillings, or 240 grotes. The pound Flemish = 7½ marks banco, or 2½ dollars.

Usance of bills from places in Germany, 14 days' sight; from Holland, Britain, and France, 1 month's date; and from Portugal, Spain, Italy, and Trieste, 2 months' date. Days of grace 12.

The Bank of Hamburg was instituted in 1619, on the credit and under the guarantee of the city, as a bullion deposit bank. It receives only silver, upon the terms already specified. Formerly, loans were granted on the security of gold and other pledges, but this practice has been abolished, except in so far as advances continue to be made upon Spanish dollars, and upon rough copper. The business and accounts of the bank are always open to proper inquiries, and its governors are all responsible. It is managed by 5 directors, 2 counsellors, 2 treasurers, and 2 of the magistrates of the city; and one of each description goes out annually. Every treasury-chest has five different locks, the keys to which are distributed among the five directors respectively, so that no treasury can be opened unless all are present. Deposits are received only from citizens of Hamburg; but no servant of the bank can have dealings with it; nor is any account opened for a less sum than 100 marks (about £7, 10s.). The money in bank cannot be seized or attached, except in the event of the depositor becoming bankrupt, when his banco is delivered to his creditors. The bank remains shut annually for three days after the 31st December, when its accounts are balanced.

This celebrated establishment gives great stability to the exchange business of most of the countries of the north of Europe, as the greater part of their foreign bills are settled in banco through the medium of Hamburg. It has now maintained the highest credit for upwards of 220 years, with the exception of two short interruptions. The first in 1669, when it was closed nearly a year, after which it was re-opened under improved regulations. The other was in 1813, when, on the advance of the French under Davoust, most of the deposits were withdrawn, and the remainder, amounting to 7,500,000 marks, seized by him for the support of his army. The bank, however, soon resumed its operations with its usual credit, and indemnification was partially made by France at the peace.

Finances.—The public revenues amount to £150,000 per annum; of which, about £35,000 are derived from customs duties. The public debt is nearly £1,500,000.

Duties.—The general rate on imports is ½ per cent. *ad valorem*, but corn, wool, linen, yarn, twist, and some other articles are wholly free. On exports the duty is ⅛ per cent. There is no transit duty, a privilege which is limited to the period of three months from receiving the transit ticket, but will be prolonged for other three months on payment of ¼ per cent. *ad valorem*; beyond this period, the goods become chargeable with the ordinary duties.

The *Stade-duties*, an ancient impost levied by Hanover on goods passing through the Elbe, are properly payable at the Castle of Brunshausen, near the town of Stade, but are collected at Hamburg, where there is an officer for the purpose. The rate originally intended to be exacted was 1/16 per cent., or one schilling on 100 marks value; but, from a late representation by the authorities of Hamburg, it appears that this rate is now the minimum, and that on the leading articles of commerce it is from ½ to 2½ per cent. The duty is rated according to a tariff, and is computed from the ship's papers; Hamburg vessels being, however, exempted. The yearly average of ships on which it is levied is estimated at 4500, and the average amount per vessel at 210 marks, making an annual sum of £70,000. The Stade impost is of a highly arbitrary, shifting, and vexatious character, and the original right to levy the tax has been repeatedly called in question.

The transit duty levied by Denmark on the land intercourse between the Elbe and the Baltic is of considerable importance in reference to the trade of Hamburg, from the sea communication being closed during the winter season. This duty is not high, but the roads of Holstein and Schleswig are in so neglected a state, that the plea of an impost for a service done cannot be urged. A duty equivalent to 9d. per cwt. is payable for traversing from Hamburg to Lubec; while from Lubec to Hamburg it is 4½d. per cwt. Certain leading articles pay an *ad valorem* transit duty, as soap, 2 per cent.; iron and tobacco, 3 per cent.; lumps, 6 per cent., when coming from Lubec to Hamburg; and when sent from Hamburg to Lubec, coffee pays 2 per cent., tobacco and sugar 2½, while dye-woods pay 10 per cent. The amount of transit trade in 1837 from Hamburg to Lubec was 24,455,805 lbs. gross weight; that from Lubec to Hamburg 13,722,560 lbs.: of this last amount about half consists of articles which are duty free. The whole gross receipts are 58,300 dollars.

A Convention of Commerce was concluded between Great Britain and the Hanseatic republics on 29th September 1825, which provides for the reciprocal abrogation of all discriminating and countervailing duties levied upon the ships of the contracting parties, or upon the cargoes of such ships in the ports of either; the convention to be in force for 10 years, and further until 12 months after notice by either of the parties of their intention to terminate the same. (*Hertslet's Treaties*, vol. iii. p. 226.) [LUBEC.]

HAMS (Du. *Hammen*. Fr. *Jambons*. Ger. *Schinken*. It. *Prosciutti*. Por. *Presuntas*. Rus. *Okorokii*. Sp. *Jamones*), the thighs of the hog, salted, smoked, and dried. [Hog.]

HANOVER, a kingdom situated in the N.W. angle of Germany, between lat. 51° 20′ and 53° 51′ N., and long. 6° 51′ and 11° 51′ E.; and bounded N.W. and N. by the North Sea, Oldenburg, and the Elbe; E. and S.E. by Prussia and Brunswick; S.W. by Hesse-Cassel, Lippe, and Prussia; and W. by Holland. Area, 14,570 sq. miles. It is divided into the provinces of Hanover, Hildesheim, Luneburg, Stade, Osnaburg, and Aurich, and the mining intendancy of Clausthal. Population, 1,722,107. Capital, Hanover, an inland city; pop. 24,000. The government is reputed a constitutional monarchy.

With the exception of the Hartz, a chain of detached mountains on the S. frontier, the kingdom consists of an immense plain, a considerable part of which, called the "Arabia of Germany," is composed of vast sandy tracts, wholly unfit for tillage. The fertile lands are confined to the banks of the rivers Elbe, Weser, and Ems, and their affluents; and to the flat coast of the sea, where artificial mounds have rescued from its ravages an expanse of very rich meadows,—the finest being the alluvial plains at the mouths of the Elbe and the Weser. The disadvantages of nature are not redeemed by art to the same degree as in other parts of Germany. Potatoes, the chief food of the poor, are universally reared, and rye is generally grown for bread; barley and oats are also cultivated to an extent that leaves a surplus for exportation; but the quantity of wheat raised is insufficient for the demand. About a sixth or a seventh part of the surface is covered with forests, which yield about 52,000,000 cubic feet of timber yearly; the principal woods are those of pine in the Hartz district, and of beech and oak in Kalenberg, the Upper Weser, and the duchy of Bremen. Grazing husbandry is extensively prosecuted, but, excepting the rearing of horses, is little understood. The minor articles of rural produce are, flax, hemp, tobacco, hops, cranberries, and honey.

The mines form an important source of wealth, but they languish under the system of interference exercised by the government. The most productive are those of lead and silver in the Hartz, from the vast forests of which fuel is readily obtained for working them. Iron ore is also richly diffused over the hilly districts, but the produce is comparatively inconsiderable. The chief other minerals are salt, copper, zinc, and vitriol.

The manufactures are very numerous, but none of them extensive. Woollens and calicoes are made at Gottingen, Munden, and some other towns; but perhaps the most important is linen. This is chiefly a domestic manufacture; there are, however, about 5000 hands wholly occupied as weavers, the linen cloths produced by whom are well known in foreign markets, under the names of Osnaburgs and white rolls; while the hempen fabrics are known as Hessians, Tecklenburgs, and bagging. The linen manufacture, it may be mentioned, is maintained without protecting duties.

Notwithstanding the advantages possessed by the country in respect to mineral wealth and navigable rivers, the trade is inconsiderable. The people have little enterprise, and the conveyance of their surplus produce to other countries is mostly in the hands of the merchants of Bremen and Hamburg. Hanover is not a member of the Prussian Commercial Union, but she is joined in a similar league with the states of Brunswick, Oldenburg, and Schaumberg Lippe. The leading articles of export are, linen, sheep's wool, corn, lead, butter, rapeseed, hemp, and flax; and of import, coffee, sugar, wine, tobacco, hardware, woollens, cottons, and twist. The number of ships is stated by Dr Bowring at 422, containing about 15,000 lasts, or 27,000 tons, of which nearly one-half is engaged in foreign trade; but this is exclusive of small coasters and river-craft. The principal commercial towns are, Munden, at the junction of the Werra and the Fulda, which has an active intercourse with the interior of Germany and the port of Emden.

Emden or *Embden*, in lat. 53° 22′ N., long. 7° 12′ E., the chief commercial place in Hanover, is situated in the province of Aurich, formerly E. Friesland, a little below the efflux of the river Ems into the bay of Dollart; pop. 12,500. It is very ancient and walled, and has the appearance of a Dutch town, being intersected by canals. It is a free port, but the trade is inconsiderable, and in modern times has declined, the harbour being shallow, and inaccessible except at high-water, and even then not for vessels drawing more than 11 or 12 feet; there is, however, a deep and safe roadstead. Shipbuilding and various manufactures are carried on, and the herring-fishery is prosecuted to a small extent. The exports, however, consist chiefly of the rural produce of E. Friesland and Munster, of which it is the emporium; the imports, of Baltic produce, French wine, and other commodities. About 700 vessels, aggregate burden 17,000 lasts, enter annually. The shipping which frequents the port consists now principally of inland craft.

MEASURES, WEIGHTS, MONIES, FINANCES, &c.

Measures and Weights.—The ell of 2 feet = 22·91 Imp. inches. The mile = 11,559 Imp. yds.

The morgen = 2 Imp. roods, 22½ perches = ·64 Imp. acre.

The ahm of 2½ eimers, 4 ankers, 40 stubgens, or 80 kannen = 34·24 Imp. galls.; and 6 ahms or 4 oxhafts = 1 fuder of wine.

The corn last of 2 wispels, 16 malters, or 96 himtens = 82 Imp. bushels.

The pound = 7511 troy grains, and 100 lbs. = 107·3 lbs. avoird.; the stone of flax is 20 lbs., and of wool 10 lbs.; the tonne of honey, containing 25½ stubgens, weighs 300 lbs.; the centner is 112 lbs. The last is 12 shipfunds, and the shipfund = 20 lisponds, each of 14 lbs. Gold, silver, and silk are weighed with the Cologne mark.

Money.—The integer of account is now the Prussian dollar, or thaler of 30 silver groschen equal to 2s. 10¾d. sterling. But exchanges are commonly effected in dollars, valued at 5 to the Louis d'or, as in Bremen. The principal gold coins are the George d'or, worth 16s. 4d.; the florin, 6s. 11d.; and the ducat, 9s. 4d.: the silver coins, since 1834, have been chiefly pieces minted according to the Prussian rate, and the following old pieces, namely, the constitution or *cash* specie-dollar, 4s. 6½d., and the zweydrittel or ⅔d. piece, 2s. 3d.

The former money of account was the thaler or rixdollar of 36 mariengroschen, each of 8 pfennings cash (*kassengeld*) = 3s. 4½d.; or the convention thaler of 24 good groschen, each of 12 pfennings = 3s. 0½d.; 9 thalers cash or constitution money = 10 convention thalers.

Usance is 14 days' sight. The days of grace are 8, except for bills at sight.

Finances.—The country is heavily taxed, and the revenue averages annually about 6,500,000 thalers. The direct imposts amount to about 1-3d, and about 1,200,000 thalers are derived from customs duties. The national debt is variously estimated at from 15,000,000 to 20,000,000 thalers.

HANSE TOWNS, a name given to certain towns situated in the N. of Europe, which formed in the 13th century an association called the *Hanseatic league*, having for its object the protection of mercantile property. It was so called from an old German word signifying union. The first point with the confederates was to repress the seizure of merchant vessels by pirates, and the robbery of goods conveyed by land; the next was to obtain justice in regard to the claims of merchants in courts of law,—a matter of no small difficulty in those rude times. The town which took the lead in forming this association was Lubec, the trade of which had become considerable in the 13th century, chiefly from its position. Situated at the south-eastern point of the Baltic, it was the natural entrepôt for the trade of Prussia, Poland, and Livonia, with the north-west of Germany; in the same manner as Hamburg, from its ready access to the North sea, was the fit port for communicating with the Netherlands and England. The distance between these towns by land being small (only 40 miles), frequent conferences took place in regard to their mutual interests; and the result was their concluding a treaty in the year 1241, by which they bound themselves to use their utmost efforts for the protection of trade. Brunswick, then the chief inland town in the north-west of Germany, and connected in trade with both Lubec and Hamburg, acceded to the treaty shortly afterwards; and in 1252, deputies from each of the three met at Lubec, where, among other arrangements of importance, they took steps for establishing factories in London, Bruges, and Novgorod in Russia. Being open to new members, they were joined in the course of the next century by a number of cities, such as Amsterdam and other ports in the Netherlands, Dantzic, as well for itself as for the lesser towns in the north of Poland, and Cologne, for the different trading places on the Rhine. The confederacy attained its greatest power in the 15th and 16th centuries, when the league comprised no fewer than 64 commercial places; and was capable of conducting extensive naval operations, and of asserting its rights by force of arms. As civilisation diffused itself, however, in the north of Europe, and the different governments made a point of protecting trade as well by sea as in their respective territories, less exertion was required on the part of the Hanse Towns. It became evident also from the example of Holland, that trade prospered most when each mercantile district or seaport was left to manage its own concerns. Hence a gradual relaxation in the bonds of the confederacy, so that during the last two centuries the name of Hanse Towns has been confined to LUBEC, HAMBURG, and BREMEN. These towns have still mercantile consuls in London and elsewhere; but they are occupied with the concerns of their constituents only, not with those of the former members of the league.

HARBOUR. [PORT.]

HARDWARE (Fr. *Clinquaillerie*. Ger. *Kurze waaren*). [IRON MANUFACTURES, &c.]

HARTSHORN. [AMMONIA.]

HATS (Fr. *Chapeaux*. Ger. *Hute*. It. *Cappelli*. Por. *Chapess*. Sp. *Sombreros*), well-known coverings for the head, are of several kinds. Beaver or stuff hats, the finest, consist mainly of two parts,—the body, and the covering or nap; the former of which is made of fine wool and coarse fur (generally eight parts rabbit's fur, three parts Saxony wool, and one part of lama, vicunia, or "red wool"), mixed, felted, stiffened and shaped; the latter of beaver-fur, made to adhere to the body by the process of felting. Plate hats, a secondary kind, have the nap composed of the fur of the musquash, nutria, or some other fur of comparatively small value; and for hats of inferior quality, coarse wool is employed for the body, and coarser fur, or sometimes fine wool, for the nap. Felt hats are a common kind without a nap; and the black glazed japan hats worn by sailors and others, have a body of coarse felted wool, and an outer glossy covering formed of a thick coating of black varnish or japan. A description of the processes of manufacture would be out of place here; but it may be mentioned, that from the time the materials are brought into the great factories (as Messrs Christy's of London) till the hat is finished, they engage the attention of from twenty to twenty-five distinct sets of workpeople. One of the most important is that by which the hat is rendered waterproof, an operation which is performed upon the felt body before the fur nap is added, by brushing on the former a composition of shellac, sandarach, gum-mastic, resin, frankincense, copal, caoutchouc, spirits of wine, and spirits of turpentine; the rectified naphtha made from coal-tar being, however, sometimes substituted for spirits of wine. Hats are dyed black by means of a bath composed of water, logwood, sulphate of iron, verdigris, and gall-nuts.

Silk hats, a cheap kind introduced of late years, are entirely different from the preceding; the body is composed of chip-straw, stiffened cambric, or coarse felted wool, and a covering or hood of woven silk shag is fashioned to the required shape, and drawn over it. The body is made in a rough way, and a resinous stiffening composition laid over the outer surface, to which the hood is made to adhere by a peculiar kind of varnish.

The finest stuff hats are made in London; but the bodies of many of those finished in that city are manufactured in Gloucestershire and Derbyshire. Plate hats are made in Lancashire, Cheshire, Staffordshire, and other places; felt hats at Atherstone, Rudgeley, Bristol, and elsewhere; silk hats in Manchester, London, Glasgow, and other large towns. In Lancashire, hoods are also made on a large scale, for the supply of places where they are worked up. The annual value of the hat manufacture of the United Kingdom is supposed to be about £2,500,000, but there are no data for forming a correct estimate.

Hats are exported in considerable quantities to the colonies; they are also sent to Brazil and to the United States; the number taken by the last, however, is comparatively inconsiderable. The exportations to other countries are of trifling amount. The declared value of beaver and felt hats annually exported is stated in the public accounts at nearly £100,000, which, however, is less than one-half the amount of those exported in 1830, which was (77,061 doz.) £209,849. The quantity imported is small, the duty of 10s. 6d. each operating as a prohibition.

Straw-hats, made chiefly of wheat-straw plaited in strips and sewed together, are worn by men in some parts of the country, but only to a small extent. Straw bonnets however are, as is well known, much used by females. An account of this branch of trade will be found under the head STRAW-PLAT.

Coverings for the head, formed of willow, straw, bark, and other rude materials, we find among the manufactures of nations in an early state of civilisation; but the use of woollen or felt for this purpose belongs to a later period. At what time felted wool was first employed for making hats it would be difficult to say. It is known, however, to have been used in Western Europe since the 14th century, though felted hats were long articles of luxury, and worn only by the rich. In the reign of Queen Elizabeth, they became common; and those of beaver were first introduced into general use. The hats worn at this period were of a great variety of shapes, some with crowns peaked, some flat and broad, and others round; each kind being, besides, differently coloured and trimmed. Shortly afterwards, the rim was made remarkably broad, and when worn, was liable to hang down; these were called slouched hats.

From the reign of Charles I. to that of William III., very broad brims were in fashion; but being found inconvenient, first one, and then two flaps, were made to turn up, until about the time of Queen Anne, when a third flap was turned up, and the regular cocked hat formed. During the ensuing fifty or sixty years, cocked hats of various sorts were much in vogue; and in the *Tatler* and *Spectator* the "Monmouth cock," the "Ramillies cock," the "Hunting cock," and the "Military cock," are alluded to. About 1750, round hats became prevalent among the lower orders, and cocked hats were considered as a sort of distinction from them. About 1780, round hats became fashionable; and by 1790, cocked hats were no longer common.

HAVANA. [CUBA.]

HAWKER. [PEDLAR.]

HAY (Fr. *Foin.* Ger. *Hew*), a name applied in this country to natural grass, rye-grass, clover, or sainfoin, when cut and dried for use as forage. According to Professor Low, no method of producing hay has been found comparable to that of the cultivated grasses. That made of natural grass, however, termed meadow hay, is the kind chiefly produced in England, especially in the western counties, and in the districts adjoining London, in which last it is brought to the greatest perfection: it is also the kind principally made in Ireland, and in the pastoral districts of Scotland. Clover hay, either pure, or mixed with rye-grass, is most common in the southern, eastern, and northern counties of England, and in the cultivated districts of Scotland. Sainfoin hay is confined to those districts that have a calcareous soil. In haymaking, the great object is to prepare it quickly, and with as little exposure to the weather and waste of the natural juices as possible. When this is done the hay will be sweet, fragrant, and of a greenish colour. Sometimes two crops are cut from the same ground in the year; but the last is never so good as the first in weight and quality. Clover hay commonly sells 20 per cent. higher than meadow hay, or than clover and rye-grass mixed.

The produce of hay varies greatly with the season and the quality of the soil. The usual weight of a crop of meadow hay is from 1 to 1½ ton per acre; of clover hay, from 1 to 3 tons; of sainfoin, from 1 to 2 tons; and of clover and rye-grass mixed, 2 tons per acre may be regarded as a good crop, but often the produce is greatly more. Hay, in the field-rick, weighs somewhat more than 112 lbs. per cubic yard; after being compressed in the stack, it weighs from 140 to 180 lbs., and when old about 200 lbs.

The sale of hay within the district including 30 miles around London, is regulated by the act 36 Geo. III. c. 88, which provides that the load of new hay shall, until the 4th September, be sold by the load of 36 trusses, each of 60 lbs.; the load thus weighing 1 ton. After 4th September each truss may weigh 56 lbs. only.

Straw is sold by the load of 36 trusses, each truss weighing 36 lbs.

HAYTI, HISPANIOLA, or ST DOMINGO, next to Cuba, the largest of the Antilles, is situated between lat. 18° and 20° N., and long. 68° and 75° W. It is separated on the E. from Porto Rico by the Mona Passage, and on the W. and S.W. from Cuba and Jamaica by the Windward Passage. Length, 400 miles, and breadth 150. Area about 25,000 sq. miles, nearly the extent of Ireland. Population vaguely estimated at 1,000,000, mainly consisting of mulattoes, and of the descendants of aborigines mixed with Europeans and negroes; the number of whites and negroes of pure blood is small. Capital, Port-au-Prince. This island, formerly divided between the Spaniards and French, is now an independent state, with a government nominally republican; the executive power being in a president chosen for life, and the legislative in a senate and a chamber of deputies: it is, however, in fact a kind of military despotism with republican forms.

Hayti is a very fine island. In the centre rise the lofty mountains of Cibao, in some places 8000 feet high, which are covered nearly to the summit with vegetation and noble woods, and from them descend numerous streams, which, uniting in four large rivers, bestow extreme fertility on the valleys beneath. From the Cibao hilly ranges branch off in different directions, running mostly from east to west. In some parts there are extensive plains; the largest of these, called Los Llanos, lies along the S. coast from the town of St Domingo eastward to Higuey, a distance of 80 miles in length, and 30 in breadth; but it is only a bare savannah, used for pasture-ground. It is separated by a low range from the fertile but ill-cultivated plain of La Vega, about 50 miles long, and 30 in breadth. Except on the E., where low and swampy lands prevail, the shores are in general bold, and almost every where surrounded by small uninhabited islands and dangerous reefs. The climate of the lowlands is hot, humid, and, for Europeans, very unhealthy. As in other tropical countries, the year is divided between the wet and dry seasons. [West Indies.]

Prior to 1791, the island was celebrated for its extensive plantations of sugar, coffee, and cotton; and the average annual exports of the French portion consisted of 58,000,000 lbs. clayed sugar, 87,000,000 lbs. muscovado, 72,000,000 lbs. coffee, 7,000,000 lbs. cotton, 950,000 lbs. indigo, 23,000 hhds. molasses, besides rum, hides, and other articles, the value of the whole amounting to nearly £5,000,000 sterling. But the present population having few wants, and being enabled, from the abundance of fertile land, to obtain the bare means of existence with facility, engage only in the lighter kinds of labour; and the plantations have now almost entirely disappeared, except those of coffee, which are also much reduced. Cotton continues to be reared only to a very small extent. Maize, millet, cassava, plantains, and sweet potatoes are cultivated, and with cocoa-nuts, cabbage-trees, pine-apples, and garden fruits, supply the chief subsistence of the natives. But the principal commercial products are now derived from the forests, which yield mahogany and various dye-woods in great luxuriance. In the plains in the eastern districts there are numerous herds of cattle. The island contains mines of gold, silver, copper, tin, iron, and rock-salt; their produce, however, is at present trifling. The gold mines were at one time worked, but they have been long since abandoned.

The exports of the great staples, on an average of the three years 1835, 1836, and 1837, consisted of 38,953,482 lbs. coffee; 8,699,292 lbs. logwood and other dye-woods; 5,055,507 feet mahogany; and 1,245,148 lbs. cotton; considerable quantities of tobacco and cocoa were also shipped; the minor articles being hides, rags, wax, ginger, and sugar. These commodities are sent to Great Britain, France, the United States, Germany (principally Hamburg and Trieste), and Holland. The imports are, from Great Britain, cotton manufactures (£260,000); linen manufactures (£85,000); with small quantities of woollens, soap, and candles, earthenware and hardware; the whole, in 1839, amounting to about £400,000: from France, wine, brandy, silks, shawls, porcelain, gloves, and articles of bijouterie; from the United States, lumber and provisions; from Germany and Holland, linens, especially bagging, coarse woollens, and Rhenish wines. A contraband trade is besides carried on with Cuba and Jamaica, the intercourse with the latter being prohibited by the act 3 & 4 Wm. IV. c. 59. This illicit trade is chiefly prosecuted at Cayes, a flourishing port on the S. W. shore, where there are several British houses established. In 1836, the shipping that entered the six principal ports consisted of 369 vessels, burden 50,580 tons; and cleared 385 vessels, burden 52,485 tons. Of these there were of British ships, entered, 84 vessels, 12,807 tons; and cleared, 99 vessels, 15,127 tons.

The external trade is entirely in the hands of foreigners, who are treated with much illiberality, being burdened with a heavy license-duty, loaded with vexatious regulations in regard to their dealings, and confined as to their residence to the free ports. These last are, Port-au-Prince, Cape Haitien, Cayes, Jacmel, Gonaives, Puerta Plata, St Domingo, and Jeremie; the first being the chief emporium of the island.

Port-au-Prince, the seat of government, lies on the W. coast, in lat. 18° 32′ N., and long. 72° 23′ W., in the innermost recess of the bay of Gonaives. The streets are commodious, but the houses in general are low and mean; pop. 30,000. It has two harbours, formed by some islets, both of which afford secure anchorage.

MEASURES, WEIGHTS, MONIES, FINANCES, &c.

The Measures and Weights are chiefly those of the old French system, including the "poids de marc." The old English wine gallon is also employed.

The carreau of land = 1·8125 acre.

The Money of account is the current dollar (or *gourde*), of 100 cents, the precise value of which cannot be assigned, as the coinage of the island, besides being of a very low standard, is exceedingly irregular. Since 1835, the customs duties must be paid in effective Spanish or North American dollars.

The Revenue in 1837 amounted to $2,082,522, of which about one-half is derived from import and export duties, three-eighths from territorial imposts, and the remainder from stamps, licenses, and petty taxes. In the same year, the expenditure was $2,713,102, including $536,305 towards the national debt.

Hayti was discovered by Columbus on his first voyage (1495), and colonies were formed by the Spaniards, which, however, were much neglected after the conquest of the American continent. In 1697, the western districts were ceded to France, natives of which country, mostly buccaneers, had previously settled there in an irregular manner. These districts were cultivated by the French with great care, and additional parts of the island being afterwards obtained, Hayti became the most valuable of their foreign possessions, especially after 1722, when the monopoly of trading companies was abolished. The prosperity of the island was at its height when, in 1791, revolutionary tumults arose among the blacks, which, in the course of a few years, led to the massacre or expulsion of all the whites. After a time two republics were formed; but at length (1820) the whole was united under the authority of President Boyer, who, in 1822, also subdued the Spanish portion of the island. In 1825, the independence of Hayti was recognised by France, to whom fr. 150,000,000 were guaranteed as an indemnity for the losses of the colonists: this sum was afterwards reduced to fr. 90,000,000, of which fr. 50,000,000 have been paid.

Under the existing constitution all Haytian citizens, of whatever origin, are distinguished by the name of *blacks*. Whites are debarred from either becoming citizens or proprietors of land; but Indians, Africans, or their descendants, are entitled to these rights after one year's residence in the island. The Roman Catholic religion is established; but all other sects are tolerated. The established religion, however, possesses no efficiency or influence in the state. Morals are generally disregarded; and the private habits of the people are chiefly characterized by indolence, ignorance, licentiousness, and filth.

HECTARE, the principal land measure in France = 2·471143 Imp. acres = 2 acres 1 rood, 35 sq. poles, 11¼ sq. yards; or 17 hectares = 42 Imp. acres nearly.

HECTOLITRE, a French measure of capacity, = 22 Imp. gallons or 2¾ Imp. bushels nearly.

HELENA, ST, a rocky but verdant island in the S. Atlantic, which formerly belonged to the British E. I. Co., and was surrendered by them to H. M. government at the expiry of their charter in 1833. Area, 47 sq. miles; population, exclusive of troops, 5000, consisting of Europeans, Chinese, and blacks. The island is important solely as being a place of refreshment for ships, and as a naval station. The climate is salubrious. James Town, the seat of government, and the only port, is in 15° 55′ S., and 5° 49′ W. There is a good anchorage, but the surf upon the shore is generally strong, particularly about Christmas.

HELIGOLAND, a small fortified island nearly 3 miles in circumference, lying in the German ocean, in 54° 12′ N., and 7° 53′ E., about 30 miles from the mouths of the Elbe, Weser, and Eyder; population 2400, chiefly fishermen and pilots. It was taken by the British from the Danes in 1807, and became a depôt for goods which were smuggled into the continental ports during the war. In 1814, it was formally ceded to Great Britain, under whose government it still continues. Heligoland has lost its former consequence, but it would be again valuable in the event of war with any of the neighbouring powers.

HELIOTROPE, a variety of jasper occasionally marked with red spots, whence its vulgar name of *bloodstone*.

HELLEBORE is of two kinds, black and white. Black hellebore is a plant (*Helleborus niger*) indigenous to the Alps, Pyrenees, and Apennines, and cultivated in our gardens for the radicles or small branches of the roots, which are used in medicine as a purgative. White hellebore (*Veratrum album*) grows spontaneously in Switzerland and the mountainous parts of Germany, and its dried roots are used in medicine, both internally and externally.

HEMP (Fr. *Chanvre*. Ger. *Hanf*. It. *Canape*. Rus. *Konapli*, *Konopel*. Sp. *Canamo*), a valuable plant (*Cannabis sativa*) of the nettle tribe, remarkable for the tenacity, durability, and elasticity of its fibres. It grows in Eastern countries, and from a remote period has been distributed over the N. E. of Europe. At present it is reared principally in Russia and Poland, and in Italy, near Naples. The plant is graceful in form, rising in northern latitudes to the height of 5 or 6 feet, and on the fertile soils of warm countries to 12 feet. It prefers a rich vegetable soil, though, according to an Italian saying, "Hemp may be grown every where, but it cannot be produced fit for use, either in heaven or earth, without manure." It possesses the anomaly of growing upon the same spot for successive years without degeneracy. The seed is sown in northern countries towards the end of April or beginning of May, and the plant is pulled in autumn. Being diœcious (*i. e.* with male and female flowers on different plants) there are two harvests; the first, of the male plants after they have discharged their pollen; the second, of the female, or seed-bearing plants, about a month later, when the seeds are ripened. The former is distinguished from the latter by its numerous flowers. After being pulled and dried, the female plants, besides being slightly thrashed in order to separate the capsules from the stems, hemp, like flax, is subjected to a steeping or water-rotting process, in order to destroy the texture of the glutinous substance which connects the fibres to the woody part of the stem. Sometimes the steeping process is omitted, and the hemp is simply dew-rotted, by being exposed, spread out on the ground, to the influence of rain and moisture. It then undergoes the several processes of drying, bruising, and scutching; after which it is bound up in bunches and carried to market,—that which breaks off or is shaken out in these operations, termed *codilla*, being of much less value. The best is of an equal green colour, free from spills, and having a strong, fine, thin, and long fibre. The produce of fibre varies from 30 to 50 stones and upwards per acre.

Hemp then passes through various operations, according to the purpose to which it is to be applied. First it is heckled, and arranged into sorts,—the coarser being termed *shorts* and *tow*. It then passes into the hands of the spinner, of the whitster, and of the weaver by whom it is made into sailcloth, sacks, common towels and tablecloths, and other coarse fabrics. It is also very extensively used for the manufacture of cordage, but its employment for this purpose is less general since the introduction of chain-cables.

The plant is cultivated to some extent in the counties of Suffolk, York, Somerset, and Lincoln; but throughout this country generally it has been found less profitable than corn; and with the exception of small quantities from Italy, and a few trifling shipments from other places, our manufacturers are almost exclusively supplied from Russia. It is principally shipped from St Petersburg and Riga; the latter being, in general, the finest.

St Petersburg hemp, derived from the provinces of Kaluga, Orel, Kursk, Tula, Smolensk, Mohileff, and Tschernigoff, is distinguished by the braack, or sworn inspectors, into three sorts,—clean, outshot, and half-clean; each in two classes, uncut and cut; the bulk consisting of the former class. The distinctions of winter-dried, spring-dried, and middle-dried, sometimes noticed, afford no criterion of quality, each proving sometimes better and at other times inferior to the others. It is shipped in bundles; that of clean weighs from 60 to 65; of outshot, from 50 to 60; and of half-clean, from 40 to 50 poods; 63 poods being equal to the ton of 20 cwt. The supplies are brought from the interior chiefly by water, the principal part arriving in June and July, the rest later. In the winter season (from November to May), purchases are sometimes made in anticipation of the next supply, part or all the price being paid in advance, and sometimes purchases are made of "remainders" of that of the preceding year. The latter will, of course, be ready for early shipment, while the former, called "contract hemp," can seldom be exported before midsummer. But during summer, purchases may be made with the advantage of a better choice of qualities; though in general not only the exchange but prices are then higher than during the contract season, when dealers sometimes make cheap sales in order to raise money. The supply brought annually to the St Petersburg market is valued by Mr Clark in his "Russia Trader's Assistant," (*Exports*, p. 59,) at £1,000,000, provided by 24 or 25 traders.

Riga hemp is distinguished by the braack as Ukraine, Polish, and Druyaner, each of these kinds having the following gradations of quality:—Rhine, or 1st sorts, marked U R H, P R H, and D R H: Outshot, or 2d sorts, marked U O H. and P O H (none of Druyaner): Pass, or 3d sorts, marked U P H, P P H, and D P H: Codilla, marked H C. Purchases are made at this port in the same manner as at St Petersburg. The annual exports from Riga amount to about £350,000.

The following from the Dundee price current of 9th August 1841 shows the comparative estimate in which the different kinds are held in the principal British market:—

Riga,	Rhine,	£41 0 0	to £	*Petersburg*,	Clean,	£39 0 0	to £40 0 0
....	Outshot,	38 0 0	.. .. ..	....	Half-Clean,	33 0 0	.. 34 0 0
....	Pass,	35 0 0	.. 36 0 0	....	Codilla,	18 10 0	.. 19 0 0
....	Codilla,	19 0 0	.. 20 0 0	India Jute		15 0 0	.. 16 0 0

During the last war, the price of hemp was subject to great fluctuations; rising from £25 a-ton in 1792, to £118 a-ton, the rate at which it stood in 1808 under the influence of the restrictions imposed by the Milan and Berlin decrees. Subsequently to 1815, it has oscillated between £24 and £50 a-ton. The import duty on undressed hemp since 1832 has been only 1d. per cwt.; on dressed, it is £4, 15s. per cwt., which is prohibitory.

Besides common hemp, a variety of other vegetable substances of the same nature, as coir, jute, and sunn, are imported into this country, in increasing quantities, from Ceylon, India, and the Philippines, and applied to the same purposes; and the whole of which are entered in the public accounts under the name of hemp. A description of these substances will be found under their proper heads; and a further account of the trade generally under Linen Manufactures, Rope, &c.

Account of the Quantities of undressed Hemp imported into the United Kingdom from various Countries, and entered for Consumption in the five Years ended 5th January 1840 :—

	1835.	1836.	1837.	1838.	1839.
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.
Russia	610,519	556,458	591,675	581,000	781,012
Italy	18,926	4,784	3,126	4,950	14,691
France	37	30	15	7,306	19,546
Asia	50,408	21,057	170,252	131,405	167,139
America, chiefly United States	3,157	....	5,347	110	2,226
Other places	4,512	3,703	3,206	5,605	11,079
Total imported	687,559	586,032	773,621	730,376	995,693
Entered for consumption	643,122	567,892	651,613	733,378	908,735

In 1840, the quantities were, imported, 684,921 cwts.; entered for consumption, 737,291 cwts. The importations of codilla and tow of hemp are not distinguished in the public accounts from those of Flax.

Hemp-seeds, the produce of the *Cannabis sativa*, abound in a thick mucilage, and are sometimes used medicinally for the preparation of emulsions : a useful oil is also obtained from them. About 10 or 12 bushels to the acre are considered as a medium produce. The best are held to be those obtained from Riga ; but wherever procured, care should be taken that they are fresh, which will be known by their being heavy, and bright in the colour. About 3500 quarters are imported annually.

Hemp-seed Oil, obtained from the seeds by pressure, is similar in its qualities to linseed oil. It is of a green colour, and strongly impregnated with the peculiar odour of the plant. It is made in immense quantities in Russia.

In ancient times the hemp-plant appears to have been valued more for its medicinal properties than for its adaptation to the manufacture of cordage. It contains a deleterious narcotic secretion of great energy ; and in various eastern countries, an infusion of the leaves is at present much used for inducing the drowsy ecstatic feeling for which opium is esteemed. The leaves, chopped very fine, are also mixed with tobacco for smoking.

HENNE, a reddish-brown substantive dye procured from the leaves of the Egyptian privet (*Lawsonia inermis*), is used extensively by Egyptian and Asiatic females for colouring certain parts of their hands and feet. It is also employed in the east for dyeing ordinary stuffs.

HERRINGS (Du. *Haringen*. Fr. *Harengs*. Ger. *Häringe*, *Heringe*. It. *Aringhe*. Por. & Sp. *Arenques*. Rus. *Seldi*). The herring is a fish (*Clupea harengus*) ranked by Cuvier in the same order with the pilchard, sprat, shad, anchovy, and white bait. The body is covered with scales, the upper part is blue or green according to the light, the lower part of a silvery white ; ordinary weight 5½ ounces, and length 10 to 12 inches ; owing to the gill-lids being very loose and opening wide, it dies almost the instant it is taken out of the water.

The opinion of Pennant that the herring periodically migrates from within the Arctic circle to the British seas to deposit its spawn is rejected by modern zoologists. “ The herring inhabits the deep waters all round the British coasts, and approaches the shores in the months of August and September for the purpose of depositing its spawn, which takes place in October or the beginning of November. It is during these months that the great fishing is carried on, for after the spawning is over it returns to deep water. The mode of fishing for herrings is by drift-nets, very similar to those employed for taking mackerel and pilchard, with a slight difference in the size of the mesh. The net is suspended by its upper edge from the drift rope by various shorter and smaller ropes called buoy ropes ; and considerable practical skill is required in the arrangement, that the net may hang with the meshes square, smooth and even in the water, and at the proper depth; for according to the wind, tide, situation of their food, and other causes, the herrings swim at various distances from the surface.”—“ The size of the boat used depends on the distance from shore at which the fishery is carried on ; but whether in deep or in shallow water, the nets are only in actual use during the night. It is found that the fish strike the nets in much greater numbers when it is dark than when it is light; the darkest nights, therefore, and those in which the surface of the water is ruffled by a breeze, are considered the most favourable. It is supposed that nets stretched in the daytime alarm the fish, and cause them to quit the places where that practice is followed; it is therefore strictly forbidden." (*Yarrell's British Fishes.*)

The herring fishery has been prosecuted on the British shores from a remote period; but its early history is involved in obscurity. The progress of the Dutch herring fishery is well known. There is a popular saying in Holland that "the foundation of Amsterdam is laid on herring bones," in allusion to the fishery having formerly been its great staple. Under the stadtholders this fishery was considered as the right arm of the republic, and it was always entitled the "Grand Fishery." When in the height of its prosperity (about 1650), the total number of vessels which it employed, including those engaged in bringing salt and exporting the fish, was stated at 6400, and the number of mariners and fishermen at 112,000. The extraordinary progress of that people led to various measures in this country for encouraging the British fisheries. These measures assumed a variety of forms at different times,—such as fishing towns built at the public expense,—associations under royal patronage,—the strict observance of Lent,—remission of the salt duties,—the importation, duty free, of foreign commodities received in exchange for fish,—lotteries,—collections in churches,—rendering it obligatory upon victuallers to take yearly a certain quantity at 30s. a-barrel,—and lastly, direct bounties. These "encouragements" all failed in communicating any thing like permanent prosperity to the fishery; and some of them, particularly that of bounties, led to great abuses (*Wealth of Nations*, b. iv. c. 5). It would exceed the limits of this article to specify the different changes which took place in the bounty system. It may be mentioned, however, that in 1820, after various modifications, an allowance of 20s. a-ton, increasing under certain circumstances to 50s., was granted on all vessels of from 15 to 60 tons fitted out for the shore fishery, exclusive of a premium of 4s. per barrel on herrings cured gutted, and of 2s. 8d. per barrel on those exported. In a few years afterwards, the principle of bounties was abandoned; in 1826, the export bounty was withdrawn, and the bounty of 4s. was reduced 1s. each succeeding year until 1830, when it ceased altogether.

The withdrawal of the bounties, so far from having injured the herring fishery, has had a contrary effect. The fishermen, no longer encouraged to look to extraneous aid, and relieved from the intrusion of landsmen who engaged for a few weeks in the fishery for the purpose of obtaining the bounty, have redoubled their exertions, and are now better clothed, better fed, and more temperate than before; while in many cases they have been enabled by their industry to substitute for the small boats formerly used others of much larger dimensions, and to provide themselves with superior fishing materials. The following statement exhibits a comparative view of the fishery both before and subsequent to the abolition of the bounties:—

Year to April 5.	No. of Barrels Cured.			Barrels Branded.	No. of Barrels Exported.		
	Gutted.	Ungutted.	Total.		Gutted.	Ungutted.	Total.
1811	65,430	26,397	91,827	55,662	18,880	19,253	38,133
1815	105,372	54,767	160,139	83,376	68,938	72,367	141,305
1820	347,190	35,301	382,491	309,700	244,096	9,420	253,516
1825	303,397	44,268	347,665	270,844	201,882	134	202,016
1830	280,933	48,623	329,556	218,418	177,776	3,878	181,654
1835	217,242	60,075	277,317	85,079	156,225	2,580	158,805
1836	397,334	98,281	497,615	192,317	270,846	2,547	273,393
1837	290,077	107,660	397,737	114,192	187,238	2,027	189,265
1838	382,400	125,375	507,775	141,552	229,160	5,997	235,158
1839	382,229	173,331	555,560	153,659	233,690	6,040	239,730
1840	410,332	138,465	548,798	152,231	253,883	1,968	255,851

Herrings are brought to market in three forms: *fresh herrings* are the condition in which they are taken from the sea; *white* or *pickled herrings* are merely salted and put into barrels; *red herrings* are gutted and salted, and afterwards hung up and fired with the smoke of green wood. Fresh herrings are consumed in considerable quantities in towns adjoining the coast; but it is the pickled and red herrings which form the great objects of the fishery. The *boat fishery* is that chiefly pursued when the fishing ground is not at a great distance from the shore. The *deep-sea fishery*, where the fishermen go out to sea wherever the fish are to be found, requires vessels of a larger description (generally from 30 to 80 tons), as the herrings are pickled and stowed on board. The vessels fitted out for this fishery commonly meet with the earliest and best herrings; and owing to the circumstance of the fish deserting parts of the coast which they have been accustomed to frequent, it is a more regular source of profit than the boat fishery, though it requires larger capital. The British cured herrings, though now much better than formerly, are still inferior to the Dutch; the British fishery, depending for its prosperity upon quantity rather than quality.

The fishery is mostly on the N. E. coast, particularly at Wick and Dunbar; it is also pursued extensively in the Orkney and Shetland Isles, on the W. coast of Scotland, Isle of Man, Yorkshire coast, and at Yarmouth, where red herrings are largely cured for the home market. A great proportion of the Scotch cured herrings is sent to Ireland, especially to Limerick, and exported to foreign parts. In 1839, the total exportations from the U. K. were, to British W. Indies, 12,344 barrels; Prussia, 62,073; Germany, 18,021; Russia, 6074; Italy and Sicily, 29,648; Mauritius, 3340; Australia, 1760; other countries, 4429; total, 137,689 barrels; declared value, £143,067. The market abroad is much less extensive than it might be if no impediments were offered by heavy duties. In Spain, Portugal, Italy, and India, the consumption might be rendered much greater.

Notwithstanding the repeal of the bounties, the fishery is still under the surveillance of a "Herring Board," which has officers at the different fishing stations, to superintend the curing department, and who affix an official brand to barrels containing a certain quality of fish.

The "British Society for extending the Fisheries and improving the Sea Coasts" is a patriotic joint-stock company, which was incorporated in 1786, for building stations in the Highlands and Islands of Scotland. No dividend has yet been made by the corporation; but it is still expected that their lands, harbours, and buildings, may yield a rent.

The last of herrings is 13,000. The barrel is 32 old English wine, or 26⅔ Imp. gallons. The cran is 45 wine, or 37½ Imp. gallons. A cade is 500 herrings.

HICKORY, a tree (*Carya*) common in this country, and growing on a large scale in many parts of the United States. Several species are recognised, though no difference can be distinguished in their timber, which is cross-grained, red at the heart, heavy, and exceedingly tough and strong; but it is subject to be attacked by worms, and it decays quickly when exposed to the weather. It is chiefly employed for carriage-shafts and springs, large screws, chair-backs, hoops, whip-handles, and similar purposes. The hickory was formerly combined with the *Juglans* or true walnut; but it is distinguished by the shell of its nuts not being deeply furrowed. The nuts of one species (*C. olivæformis*), called Pecan nuts, form a small article of N. American trade.

HIDES (Du. *Huiden*. Fr. *Peaux*. Ger. *Häute*. It. *Cuoja*. Por. *Pelles*. Rus. *Koshi*. Sp. *Pellejos*, *Pieles*), the skins of cattle, form an important branch both of our inland and foreign trade. Various kinds are distinguished. Raw or green hides are those in the state in which they are taken from the carcass; salted hides are those dressed or seasoned with salt, alum, or saltpetre, to prevent them from putrefying; and tanned or cured hides. The animals whose hides are met with in commerce are the ox, buffalo, and horse. The buffalo hide is larger and heavier than that of the ox, and is, besides, distinguished by a tuft of hair on the shoulders. Losh hides are buffalo and others dressed in oil in the same way as chamois skins. Muscovy or Russian hides are tanned and coloured of a brown or red colour. The quantity of untanned hides annually imported into the United Kingdom is now from 350,000 to 400,000 cwts., fully seven-eighths of which are entered for home consumption. Upwards of one-half of the whole importations is from Buenos Ayres; considerable quantities are likewise brought from Brazil, the East Indies, Cape of Good Hope, and United States; while smaller shipments are made from the N. of Europe, Morocco, Philippine Islands, W. Indies, Australia, and other places. The importations of tanned hides, owing to the heavy duty, are inconsiderable, seldom exceeding in a year 100,000 lbs. [LEATHER. SKINS.]

HIMTEN, a German corn measure, varying in different places.

HIRING. [BAILMENT. CARRIERS. CHARTER-PARTY. SHIPPING. MASTER AND SERVANT. PRINCIPAL AND AGENT.]

HOG, one of the most useful and widely distributed of the domestic animals. It possesses extraordinary fecundity, lives and thrives on almost every kind of food, and converts a given quantity of aliment into fat sooner than any other animal. Of the domestic hog (*Sus aper*) numerous varieties are distinguished. In England, the chief are—the Chinese hog, of eastern origin, small in size, delicate of aspect, and remarkable for its fecundity and disposition to fatten; the Neapolitan, smooth and black, also highly prolific, though not hardy; the Berkshire, middle sized, and reddish-white colour, with brown or black spots, is much esteemed, the most generally spread of the native breeds, and is that commonly fed in distilleries; the Hampshire, chiefly of a white colour, is the best of the larger classes. Other varieties exist in various counties. In Scotland, there are several mixed kinds. In Ireland, they are usually of a large size and coarse form. In the hog, the same external characters indicate a disposition to fatten, as in other live stock. "The chest should be deep and broad, the ribs largely arched, the neck short, and the head and limbs small; the bristles should be soft, approaching to hair, and the skin soft and elastic." (*Low's Agriculture.*)

The animal is fed for two purposes. The one is to yield pork, which may be used either fresh, salted, or pickled, and for which the pigs are ready in 6 or 8 months; the other is to produce bacon, prepared by salting and drying the flesh, and for which they are ready in 10 or 12 months. The smaller class of early feeding pigs is preferred for the former purpose, the larger class, as the Hampshire, for the latter. In the case of pickling pork, the carcass is cut into pieces, and packed in kits or barrels. When designed for bacon, the body is cut so as to separate the hams or legs from the flitches or sides: It is generally cured in the cold months, from September to April. The flesh of the hog is highly nutritive, and it forms a great part of the animal food of the labouring classes of many countries, especially England; while, from its ready reception of salt, it is better fitted for preservation than any other flesh, and is thus eminently adapted for sea voyages, for which purpose it is largely used.

In England, Yorkshire and Westmoreland are distinguished for the quantity and quality of their hams. The best bacon is made in Wilts, Hampshire, and Berks. But the English hams and bacon are now confessedly rivalled by those of the Scotch counties—Dumfries, Wigtown, and Kirkcudbright—large quantities of which are shipped to Liverpool. In Ireland, hogs are very generally reared, the pig being an inmate of almost every cottage; and large quantities of pork, bacon, and hams, are sent from thence to Liverpool, Bristol, and Glasgow. They are comparatively coarse and ill flavoured, an inferiority resulting as well from bad feeding as from want of skill and attention in the process of curing. The shipments from Ireland to Britain in 1825 were,—bacon and hams, 362,278 cwts.; beef and pork (not separated in the public accounts), 604,253 cwts.; and in 1835, bacon and hams, 379,111 cwts., estimated value, £828,158; and beef and pork, 370,172 cwts., value, £723,935.

The exportations from the United Kingdom have increased of late years, and in 1839 the quantities and declared value were as follow,—bacon and hams, 31,519 cwts., £98,431; beef and pork, 66,222 barrels, £227,465; sent mostly to the W. Indies, and in small quantities to British America, Australia, Cape of Good Hope, Mauritius, India, Spain, and other places. The importations, owing to the heavy duty, are trifling.

HOGSHEAD, a British measure of capacity prior to the introduction of the Imperial system. The wine hogshead contained 63 wine gallons = 52·49 Imp. galls. The ale hogshead contained 54 ale gallons = 54·92 Imp. galls.

HOLIBUT, a large flat fish (*Hippoglossus vulgaris*), sometimes confounded with turbot, but much inferior in quality. The flesh, though white and firm, is dry, with but little flavour. Its capture is principally confined to the northern fisheries.

HOLLAND [NETHERLANDS, KINGDOM OF THE].

HOLOGRAPH, in the law of Scotland, is an expression used to designate a deed which, from being wholly in the handwriting of the granter, is, to a certain extent, privileged, and probative without the solemnities which other deeds require in their execution.

HONDURAS (BRITISH), a settlement extending along the E. coast of Central America, between lat. 15° 54′ and 18° 30′ N., and long. 88° and 90° W. Area, ill defined. Population in 1839, whites, 235; coloured, 7700; total, 7935. It is governed by a superintendent, who is assisted by seven councillors elected annually.

The shore is studded with low coral isles, called keys, and the coast is rocky but flat; the land, however, gradually rises into a bold and lofty region, interspersed with rivers and lagoons, and covered with noble forests. The country is rich in vegetable productions, and arrowroot and rice are grown to a small extent, but cultivation is neglected, and the inhabitants chiefly employ themselves in wood-cutting, principally the mahogany tree, of which this district is the chief seat, and collecting natural produce. The exportations in 1836 consisted of 9,768,293 square feet of mahogany, 992 tons logwood, 3585 tons cochineal, besides hides, cocoa-nuts, cedar, turtle, and other articles.

Balize, the only town and port, is built on both sides of the river of that name, in lat. 17° 30′ N., long. 88° 8′ W. The houses, constructed of wood, are raised 8 or 10 feet from the ground, on pillars of mahogany; pop. about 5000. There is excellent anchorage for vessels of moderate size, which is protected by the numerous keys from the heavy swells of the open sea. Besides the exportation of the produce of the colony, Balize has of late years become the depôt of British manufactures and foreign merchandise designed for the consumption of Central America, which are forwarded thence to Izabal and Omoa.

The imports as well as exports of Balize, and the colony generally, are estimated to amount to between £400,000 and £500,000. In 1839, 107 vessels entered, of which, belonging to Great Britain, 81; British colonies, 4; United States, 22.

The measures and weights are British, and accounts are kept in pounds, shillings, and pence currency. The nominal par of exchange with England is £140 Honduras currency per £100 sterling, but the premium on mercantile bills is always considerably higher. In 1837, the premium was about 18 per cent., and in 1838, from 18 to 20 per cent. The Spanish dollar is valued at 6s. 8d. currency, the doubloon at £5, 6s. 8d. currency. The public revenue amounts to about £20,000.

The British occupation of this coast appears to have been commenced by smugglers and logwood cutters from Jamaica, in the 17th century. In 1754, the settlers were expelled by the Spaniards, but permitted to return in 1763. In 1779, they were again expelled, but restored in 1783. The colony was once more attacked by the Spaniards in 1798, but unsuccessfully; and the coast from the Rio Hondo, on the N., to the Sarstoon river on the S., with the adjacent country, is now considered to belong to Great Britain by right of conquest.

HONE, a fine kind of stone, imported from Germany and Turkey, used for sharpening or setting cutlery. It is of a green colour, inclining to yellow, often marked with thin dendrical lines, and is moderately hard, having a fine close texture resembling indurated clay.

HONEY (Fr. *Miel*. Ger. *Honig*. It. *Miele*. Sp. *Miel*), a well-known product of the bee. Its taste is pleasant and sweet; smell balsamic, and various, according to the flowers from which it is collected. When new, it is viscid, thick, and smooth; when old, crystalline and granulated. The best is that which is freest from colour, and contains the largest grains when it concretes. That obtained from young bees, and which flows spontaneously from the combs, is the purest and finest; it is known by the name of *Virgin honey*. Honey separated from the wax by expression is less pure; and there is another sort still inferior, obtained by heating the combs before they are pressed. It is often adulterated, or originally bad. When collected where fetid flowers abound, as species of garlic, its smell is offensive. Genuine honey does not ferment spontaneously or mould. It is often mixed with water to increase its bulk,—a fraud known by its thinness, and having no tendency to granulate. More commonly flour is added as well as water. This kind also granulates very imperfectly, and the adulteration is detected by dissolving it in cold water, when the flour subsides. Honey is abundantly produced in this country. It is also imported from Narbonne in France and other places.

HOONDEE, in India, a native bill of exchange.

HOOPS, the circular bindings of casks or barrels.

HOPS (Fr. *Houblon*. Ger. *Hopfen*). The hop, a diœcious plant (*Humulus lupulus*), with a perennial root, is extensively cultivated in Kent, Sussex, and Herefordshire, on account of the female catkins, which, after being picked and kiln-dried, are used by brewers for giving a bitter flavour to beer, as well as for preserving it. Hops vary in produce from 2 to 20 cwts. per acre; from 10 to 14 cwts. is a favourable crop. The expense of forming new ground is frequently little less than £100 per acre. Warm seasons with little rain are required for good crops. Great heat after rains, and high winds, are particularly destructive, and they are exposed to numerous diseases and the ravages of many insects, so that their culture is both expensive and uncertain.

The finer flavoured and light coloured hops are pressed into *pockets*, or sacks, of comparatively fine cloth, which weigh about 1½ cwt. each, and are sold chiefly to the ale-brewer. The strong flavoured and high coloured hops are put into *bags* of a very coarse mat kind of texture, which contain generally double the weight of the pockets. These are used by porter and small-beer brewers. The fine flavour or aroma of hops does not exist a year. Beyond that time they become *old hops*; and are sold at a cheaper rate to the porter-brewer. A year or two longer, and the bitter itself disappears; and the whole becomes nothing better than chaff. The Nottinghamshire or *North-clay hops*, have the pre-eminence in rankness, and, accordingly, with a certain description of buyers, bear a higher price than the Kent, though that is not so high as the general price of Farnham hops. Of the Kent hops, the best are those grown near Canterbury ("*Art of Brewing*," *Lib. of Useful Knowledge*). The strength of hops is judged by the thickness and solidity of the catkins; and the flavour by the smell.

From 50,000 to 60,000 acres in England are occupied with hop gardens, about one-half being in Kent; and an excise duty of 18s. 8d. per cwt. is levied upon their produce (45 Geo. III. c. 94), for which, however, nearly a year's credit is allowed by 1 & 2 Wm. IV. c. 53. The quantities charged with duty were, in 1835, 49,086,709 lbs.; in 1836, 41,874,913 lbs.; in 1837, 37,295,304 lbs.; in 1838, 35,801,224 lbs.; and in 1839, 42,898,629 lbs. The amount of duty in 1839 was £357,488. British hops are exported to Hamburg, Antwerp, St Petersburg, New York, Australia, and other places. The quantity imported is trifling, as the duty is of a prohibitory character.

British hops reimported are to be deemed foreign.—(3 & 4 Wm. IV. c. 52, § 33.)

HOREHOUND (WHITE), a common herb (*Marrubium vulgare*), the leaves of which are an article of the materia medica. They are of a whitish-gray, woolly appearance, and possess a faint odour, and a bitter, sharp taste.

HORN (Fr. *Corne*. Ger. *Horn*) is distinguished from bone by being soft, tough, semi-transparent, and susceptible of being cut and pressed into a variety of forms; properties which fit it for being employed in turnery, for knife-handles, and in the manufacture of combs, snuffboxes, lanterns, and other articles. The horns of the ox, goat, sheep, and other animals are largely used for these purposes; and besides those obtained in this country, about 30,000 cwts. are annually imported from abroad, two-thirds of which are entered for home consumption. The horns of goats and sheep are preferred from their being whiter and more transparent than those of other animals.

HORNBEAM, an indigenous British tree (*Carpinus betulus*), common in copses. In appearance it is graceful, resembling the beech. Its wood is tough, and well suited for tool-handles, cogs, and for other purposes in which strength is required; but it is coarse, and unfit for cabinet work.

HORSE, a noble quadruped (*Equus caballus*), whose beauty, strength, and docility have now connected him, directly or indirectly, with almost all the purposes of life. The horse is strictly herbivorous. His stomach is comparatively small, and he eats often. He sleeps very little, and frequently standing. The foal is used for work when about 3 years old. The horse lives for 20 years, but is seldom capable of much work after 15. The age can be ascertained by the teeth till the eighth year; after which he is said to be "past mark." In old animals, however, the gums shrink from the teeth, which are left very long, and become of a yellow or brown colour.

The horse is vastly modified in his form and character by the physical condition of the countries in which he is naturalized. The pony of Norway or of the Highlands of Scotland and the huge horse of the plains present extremes of strength and size; while, again, these contrast in a striking manner with the light form and agile shape displayed by those fed on the arid plains and scanty herbage of warmer countries. To the intermixture of the last with the former the technical term *blood* is applied. Importations of them anciently took place from Spain and Barbary; and at a later period from Arabia. The African and Arabian horses, accordingly, have given their characters to the blood-horse of England and its innumerable varieties. "The animal in which this effect of blood is the most remarkable is the English race-horse. For the combination of speed with the necessary strength, this creature can scarcely be surpassed. He forms, however, a race of artificial creation, admirably suited for a particular purpose, but not otherwise deserving of cultivation, except from this, that it is the stallions of this race that continue the excellence and purity of the parent stock. The hunter is perhaps the finest race of horses known. It combines the blood of the Arabian and other races of the South and East with the powerful form of the horses of the N. of Europe in a much happier proportion than the race-horse. From the hunter downwards to the races where no mixture of southern blood can be traced, the gradations are innumerable. It is in this class that our road horses and hackneys, the horses employed in our coaches and carriages of all kinds, nay, often in the mere labour of heavy draught, are contained. It forms the most numerous class of horses in the country. But a large proportion is bad, having lost the hardiness and strength of the native race, without having arrived at the speed and other qualities of good breeding. The remaining class of horses consists of those in which no mixture, or a very slight one, of stranger blood is found. These are the ponies of our mountains, or the larger horses of the plains" (*Low's Agriculture*). Of the last, usually termed cart or farm horses, the most commonly enumerated breeds are—1. The Old English black horse, of very large size, chiefly bred in the midland counties, from Lincolnshire to Staffordshire; 2. The Clydesdale, or breed of the central plains of Scotland; 3. The Cleveland Bay, the origin of the better kind of coach-horse, bred over the whole of Yorkshire and Durham; and 4. The Suffolk Punch, so termed from its punchy form.

"In a horse where speed alone is required, the chest must not be too broad; but in a horse in which we require the power of active motion, or, in technical language, *action*, combined with endurance, there should be a sufficient breadth of chest, and a medium, therefore, is what is desired in the hackney and hunter. In the farm-horse the chest should be broad, because in the farm-horse we require the power of draught, and not of speed. The chest of the horse behind the shoulders should be deep; his back, when we look for strength, without sacrificing this to mere speed, should be short; the ribs should approach near to the pelvis, as indicating strength, though if speed alone be required, this point may be sacrificed. The fore arm and hind leg to the joints should be muscular, and below the joints tendinous. The trunk should be barrel-shaped, but somewhat elliptical, and gently enlarging from the breast backward." (*Ibid.*)

The demand for horses for the saddle, for carriages, and for the heavier labours of every kind is very great. They are mostly produced on ordinary farms; but the race-horse and the finer animals for the saddle are bred chiefly in Yorkshire. A considerable number of blood horses are also reared in Ireland, especially in the rich grazing counties of Meath and Roscommon; they are smaller and clumsier than the English, but strong and hardy, full of fire and courage, and the best leapers in the world.

There are not any documents from which the number of horses kept in this country can be ascertained. The elements for such a computation, which never were very complete, have of late years been rendered much less so through the repeal of the taxes levied upon such as are used for various employments. Mr M'Queen estimates the number in the United Kingdom at 2,118,195, but this we consider an exaggeration. The exportation of horses has of late years grown into importance. The quantity imported is inconsiderable.

The principal repositories in London for the sale of horses by public auction or private contract, are:—*Dixon's*, Goswell Street, on Tuesdays and Fridays; *Horse Bazaar*, King Street, Portman Square, Tuesdays and Saturdays; *Morris'*, late *Aldridge's*, Little St Martin's Lane, Wednesdays and Saturdays; *Tattersall's*, Grosvenor Place, Hyde Park Corner, Mondays and Thursdays.

There are few sources of greater annoyance, both to the buyer and the seller of the horse, than disputes with regard to *soundness*. "That horse is sound in whom there is no disease, nor any alteration of structure in any part which impairs, or is likely to impair, his natural usefulness. That horse is unsound that labours under disease, or that has some alteration of structure that does interfere, or is likely to interfere, with his natural usefulness." "In the purchase of a horse, the buyer usually receives, embodied in the receipt, what is termed a *warranty*. It should be thus expressed:—

"Received of A B forty pounds for a gray mare, warranted only five years old, sound, free from vice, and quiet to ride and drive. "C D."

"A receipt including merely the word 'warranted,' extends only to soundness,—'warranted sound' extends no further; the age, freedom from vice, and quietness to ride and drive, should be specially named. This warranty extends to every cause of unsoundness that can be detected, or that lurks in the constitution at the time of sale, and to every vicious habit which the animal has hitherto shown. To establish a breach of the warranty, and to be enabled to return the horse or recover the price, *the purchaser must prove that it was unsound or viciously disposed at the time of sale.* In case of cough, the horse must have been heard to cough previous to the purchase, or as he was led home, or as soon as he had entered the stables of the purchaser. Coughing, even on the following morning, will not be sufficient; for it is possible that he might have caught cold by change of stabling." "*No price will imply a warranty*, or be equivalent to one; there must be *an express warranty*." "The warranty should be given at the time of sale. A warranty, or a promise to warrant the horse, given at any period antecedent to the sale, is invalid." "A warranty after the sale is invalid, for it is given without any legal consideration. In order to complete the purchase, there must be a transfer of the animal, or a memorandum of agreement, or the payment of earnest-money: the least sum will suffice for earnest. No verbal promise to buy or to sell is binding without one of these." "Where there is no warranty, an action may be brought on the ground of fraud, but this is very difficult to be maintained, and few possibly will hazard it. It will be necessary to prove that the dealer knew the defect, and that the purchaser was imposed upon by his false representation; and that, too, in a case in which a person of ordinary circumspection might have been imposed upon."—(*The Horse, Lib. of Useful Know.*, p. 361-368.)

The repositories in London and other great towns for the periodical sale of horses by auction, are of great convenience to the seller, who can at once get rid of a horse with which he wishes to part, and who is relieved from the nuisance or fear of having it returned on account of the breach of the warranty, because in these places only two days are allowed for the trial, and if the animal is not returned within that period, he cannot be returned afterwards. They are also convenient to the purchaser, who can thus soon find a horse that will suit him, and which, from this restriction as to the returning of the animal, he will obtain 20 or 30 per cent. below the dealer's prices.

Assessed Taxes on Horses in Britain.—Horses for riding, or drawing carriages.

No.	Each Horse.			No.	Each Horse.			No.	Each Horse.		
	£	s.	d.		£	s.	d.		£	s.	d.
1	1	8	9	8	2	19	9	15	3	3	9
2	2	7	3	9	3	0	9	16	3	3	9
3	2	12	3	10	3	3	6	17	3	4	0
4	2	15	0	11	3	3	6	18	3	4	6
5	2	15	9	12	3	3	6	19	3	5	0
6	2	18	0	13	3	3	9	20	3	6	0
7	2	19	9	14	3	3	9				

And so on at the same rate for any number of such horses.

	£	s.	d.
Race-horses, each	3	10	0
Horses let for hire without paying post-horse duty, each	1	8	9
Horses rode by butchers in their trade, each	1	8	9
Where two only are kept, the second at	0	10	6
Horses for riding, not exceeding the height of 13 hands, each	1	1	0
Other horses and mules 13 hands high, each	0	10	6

Exemptions.—Horses used for the purposes of husbandry or by market-gardeners in their business.

Farm-horses occasionally used for drawing burdens, or let for drawing, for hire or profit, if not used for drawing any carriage chargeable with duty.

Horse used for the purpose of riding, or of drawing any carriage not chargeable with duty, by any tenant of a farm at a rack-rent under £500 per annum, provided the person claiming the exemption keep only one such horse, and have no income exceeding £100 per annum from any other source.

Horse used for riding by any bailiff, shepherd, or herdsman, where only one such horse is kept.

Horse used for the purpose of riding, or of drawing any carriage not chargeable with duty, by any clergyman (including dissenters), provided the person claiming the exemption keep only one such horse, and have an income, whether arising from his ecclesiastical appointment or otherwise, under £120 per annum.

Mares kept for the sole purpose of breeding.

Horses kept by licensed postmasters may be used for husbandry, and for drawing fuel, manure, corn, or fodder, free from duty.

Horsedealers in London and within the bills of mortality are assessed in payment of an annual duty of £25; and in other parts of Britain, £12 : 10. *Exemptions.*—Persons who only sell horses bred by themselves or kept as farming-stock at least 3 months.

HORSE-POWER, the dynamical unit employed to express the force of the steam-engine, is estimated at 33,000 avoirdupois pounds weight, raised one foot high in a minute; being a force equal to that which the average strength of a horse was believed capable of exerting. "There have been different estimates as to the real power of horses, and it is now considered that, taking the most advantageous rate for using horse-power, the medium power of that animal is equal to about 22,000 lbs. raised one foot high per minute. However, the other, 33,000 lbs., is taken as the standard, and is what is meant when a horse-power is spoken of. In comparing the power of a steam-engine with that of horses applied to do the same work, it must be remembered that the engine horse-power is 33,000 lbs. raised one foot per minute, the real horse-power only 22,000 lbs.; and that the engine will work unceasingly for 24 hours, while the horse works at that rate only 8 hours. The engine works three times as long as the horse,—hence, to do the same work in a day as an engine of one horse-power, 4·5 horses would be required. The power of a man may be estimated at 1-5th of the real power of a horse, or 4400 lbs. raised one foot per minute."—(*Hugo Reid on the Steam-Engine.*)

HORSE-RADISH, the pungent root of the *Cochlearia armoracia*, a perennial plant, common in moist places. It is used as a condiment, and is besides an article of the materia medica.

HOSIERY. This manufacture may be held to date its origin from the introduction of the stocking-frame, the first machine successfully used in England for superseding hand-labour in the manufacture of clothing. It was invented by the Rev. William Lea of St John's College, Cambridge, so early as the year 1589; and though its value and importance were not at first understood, and a considerable time elapsed before its produce superseded the trunk-hose then worn, the impulse which it gave to trade was sensibly felt before the lapse of half a century; and by 1669, there were about 660 frames in Britain, affording employment to 1200 workmen. Successive improvements were afterwards devised: tuck-ribs were invented in 1730, about which time also cotton was first used in the manufacture of stockings; and in 1759, Jedediah Strutt obtained his patent for Derby ribs; but no very considerable improvement was communicated to Lea's invention until lately, when stocking-frames with a rotatory action, and worked by steam-power, were brought into use.

The counties of Leicester, Nottingham, and Derby, are the chief seats of the manufacture in this country; in the first, woollen hosiery is the principal branch, in the second, cotton, and in the third, silk. Woollen hose are also made on a considerable scale in Wales, and at Hawick, in Scotland. It is not possible to make any comparative estimate of the growth of the hosiery manufacture, but there cannot be a doubt that the home trade has been very greatly increased within the last fifty years. Of the present extent and value of the manufacture, perhaps the best estimate is that made a few years ago by Mr Felkin of Nottingham. This gentleman calculates the value of cotton hosiery annually made at £880,000, that of worsted at £870,000, and that of silk at £241,000. He estimates the number of stockings manufactured yearly at 3,510,000 dozens, and in the production of these there are used 4,584,000 lbs. of raw cotton, value £153,000; 140,000 lbs. of raw silk, value £91,000; and 6,318,000 lbs. of English wool, value £316,000; making the total value of the materials £560,000, which are ultimately converted into the exchangeable value of £1,991,000. The total number of persons employed is 73,000. The fixed and floating capital invested, taking the machines at their working value, may be thus stated: Fixed capital in mills and machinery for preparing worsted, cotton, and silk yarn, £140,000; fixed capital in frames, £245,000; floating capital in spinning, &c. £270,000; floating capital in hosiery, £780,000. Total amount of fixed capital, £385,000; total amount of floating capital, £1,050,000 (*Porter's Progress of the Nation*, sec. 11. chap. 2. p. 246). In this estimate, however, no allowance is made for the value of the stockings knitted by wires, which, although very much diminished, is still considerable.

Neither the quantity nor the value of the hosiery exported can be stated, as our custom-house returns include with stockings cotton-lace and a variety of articles under the head of "small-wares;" the annual declared value of the whole being about £1,500,000. But there is little reason to believe that of late years it has increased, at least in the cotton department (except perhaps to the colonies), owing to the arduous competition which our manufacturers have now to sustain in this branch with those of Germany. The principal seat of the German cotton-hosiery is Chemnitz, in Saxony, where stockings and socks are made with Lancashire yarns, at prices which have not only excluded British goods from their markets, but, within these few years, have enabled them even to be entered for consumption in this country, after paying a duty of 20 per cent. The following is a statement of the quantities of cotton stockings and socks of foreign manufacture imported and entered for home consumption in each of the five years to 5th January 1840:—

	1835.	1836.	1837.	1838.	1839.
Imported, pairs . .	209,271	287,252	190,552	398,361	498,927
Entered for consumption, pairs	35,911	37,623	39,550	12,470	36,144

The advantage acquired by the Saxon manufacturers in cotton hosiery arises from the comparatively low rate of wages paid by them, and the greater proportion which the cost of labour bears to the cost of the material in that department of the trade than in the others. In cotton-hosiery goods, the cost of labour constitutes from two-thirds to five-sixths of their value, while in woollens it does not exceed two-fifths, and in silk articles the proportion is still smaller. It does not appear probable, therefore, that our manufacturers of woollen and silk hosiery have so much to apprehend from foreign rivalry as those of cotton.

In Germany, according to Dr Bowring, the hosiery manufacture has grown up spontaneously, without any protection, and is one of those that has made, and is making, most progress in that part of Europe. "I believe," says he, "at this moment, the cotton frames of Saxony are equal, if they do not exceed in number those of this country."—(*Report on Import Duties*, 1840, p. 64.)

HOY, a long, low, flat-bottomed vessel, with one or two masts, used for carrying luggage and other articles along shore in smooth water.

HUCKABACK, a coarse hempen or linen fabric, commonly made into towels.

HUDSON'S BAY TERRITORY, the lands in North America granted to the Hudson's Bay Company. The boundaries of these lands were never very satisfactorily defined. They were declared to comprehend all districts in which was contained the source of any stream which discharges its waters into Hudson's Bay; but since the union formed between this association and the North-west Company in 1821, it claims a kind of proprietorship over the whole of British America, with the exception of the settled provinces or governments.

This territory forms the northern part of the great central plain of N. America. Little precise information has been obtained as to the soil, but a large part of it has a climate so unfriendly to vegetation, that even the hardiest trees are incapable of withstanding its rigour. A great portion of the S. part, however, is covered with woods, and at several places iron, copper, lead, coal, and salt have been discovered; but the present wealth of the country consists in the fur-bearing animals, the skins of which form the principal object of traffic. Indeed, the interior must be considered as little better than a hunting-ground, with, perhaps, the exception of a district about the Red River of Lake Winnipeg, which was sold by the Company to Lord Selkirk, and is assuming the form of a European settlement. The inhabitants of the coast are chiefly Esquimaux, and of the central parts Indian tribes; the whole supposed to amount to about 150,000.

The Hudson's Bay Company, chartered in 1670, and possessing the monopoly of the fur trade in these regions, is now the only survivor of the numerous exclusive bodies to which many branches of British trade were at one time subjected. The supreme direction is vested in a board consisting of a governor, deputy-governor, and seven directors, who hold their sittings in London. A resident governor, appointed by them, has the superintendence of all the settlements, and is assisted by local councils, composed of the principal officers in each district, who meet him at central points during his annual tours of inspection. The acting officers consist of chief factors, each of whom has charge of several posts, of principal and secondary traders, and of clerks. The higher offices are filled up according to merit from the inferior ones; so that it is perfectly open for a clerk to rise to the rank of chief-factor. The company have at present in their employ about 1000 Europeans and their descendants by Indian wives. They have 4 or 5 principal stations. York Fort, the most important, commands all the vast region extending W. and N. of Hudson's Bay. Moose Fort, at the S. extremity of Hudson's Bay, presides over all the country between that gulf and the Canadian lakes. Ungava Bay, at the exterior entrance of Hudson's Strait, contains a small station for collecting the produce of the adjacent coast of Labrador, chiefly consisting of oil from the seal and porpoise. Montreal is the centre of the transactions carried on in the Canadas. Lastly, the Company have important stations to the west of the Rocky Mountains, particularly Fort Vancouver on the Columbia, though the territory on that river is a subject of dispute between Britain and the United States. [Furs.]

The Company's vessels, carrying out the stores to Hudson's Bay, sail from London on the 1st June, so as to arrive about the end of August, when the navigation becomes open. They then deposit their cargoes, which remain in store till the commencement of the ensuing season; when in return they receive furs and other articles which have been brought from the interior, and commence their voyage to England, if possible, before the end of September. The ships employed in the trade of the western territory leave the Thames in November, and sail round Cape Horn. The trade employs 4 or 5 ships yearly. The annual value of the imports from this country is about £55,000; while that of furs and other articles exported varies from about £35,000 to £70,000.

HUNDREDWEIGHT, the chief British measure of weight for bulky articles, contains 112 lbs. avoirdupois.

HUSBANDAGE, the commission given to a shipshusband, or managing owner.

HYPOTHEC is a lien or security over some piece of property, the custody of which does not pass to the holder of the security, but remains with the proprietor of the article. The term is employed only when the property is moveable. In Scotland, the real security which the landlord has for his rent, over the produce of a farm or the furniture of a house, is called a hypothec. The laws of this country do not give encouragement to a species of security which carries so slight an indication of its existence, and admits so many opportunities for fraud. There can scarcely be said to be any tacit hypothecs in existence, with the exception of those just stated, and the only instance in which conventional ones are recognised, are in the case of a security taken over a ship, or over a cargo, for necessaries on a voyage. [Bottomry. Respondentia.] In France, where these securities admit of being registered, they are more generally acknowledged.

I.

ICE is extensively used for a variety of economical purposes, such as cooling liquors, packing salmon, and as an ingredient in some confections. In warm climates it is prized as a luxury; and in Bengal and other hot countries, artificial means are regularly used for its manufacture. Of late years, however, the practice has been adopted of shipping it from cold to warm countries. In September 1833, a cargo of solid ice, shipped at Boston, was discharged at Calcutta. The price at which it was offered was 3d. per lb., while the native ice could not be sold under 6d. It was packed in solid masses, within chambers of double planking, with a layer of refuse tan or bark between them; but the Americans expected, by improved methods of packing, to lower the price of future consignments one-half. The whole quantity shipped was 180 tons, of which about 60 wasted on the voyage, and 20 on the passage up the river to Calcutta, and in stowing away. Various other vessels with similar cargoes have since arrived in India. It is also exported from the United States to Brazil and other countries.

Ice for the use of the fisheries is to be admitted duty free into Coleraine, Londonderry, and Sligo. *Treas. O.*, May 10, 1828.

ICELAND, a large volcanic island in the Northern Ocean, between lat. 63° 23′ and 66° 33′ N., and long. 13° 20′ and 24° 31′ W. Area, 38,230 square miles. Population 56,000. It is subject to the King of Denmark, by whom a stiftsamtmann or governor is appointed every five years.

The aspect of Iceland is rugged, barren, and highly repulsive,—fire and ice seeming ever conjoined, and yet ever contending for the mastery. "It looks almost like the fragment of some former world that has alone escaped destruction, confirming the opinion which regards it as a portion torn from the bottom of the sea by the expansive energies of fire." Only about one-ninth part is inhabited, the remainder being covered with chains of naked mountains of ice, called jökuls, or with valleys rendered equally desolate by lava and ashes ejected from numerous volcanoes, including the celebrated Hekla. The island, though almost entirely in the temperate zone, approaches in climate nearer to polar lands; trees seldom rise above 10 feet, and very little corn is grown. The main harvest is hay, the rearing of cattle forming, with fishing, the principal occupation of the people. In 1832, according to Mr Barrow, the live stock on this island was 50,000 horses, nearly 40,000 cattle, and 500,000 sheep. There are no regular trades or manufactures. "Every farmer is his own carpenter and smith, though it not unfrequently happens that the clergyman, by his superior skill, monopolizes the trade of shoeing horses." Stockings and mittens, however, knitted by the women, are largely exported; the other exports consist of wool, skins, dried fish, oil, salted mutton, elder-down, sulphur, and tallow, the latter being chiefly shipped from the factory of Husavik on the Skialfianda Fiord. The imports are rye, pease, barley, salt, brandy, iron, tar, colonial produce, fishing lines, and cables.

The island is divided into four commercial districts;—Reikiavik, Eske Fiord, Eyd Fiord, and Isa Fiord; and ships arriving in one are not allowed to go to another. The trade is mostly carried on by the Danes, though a few British and Norwegian vessels sometimes pay the island a visit. The chief port, and almost only town is Reikiavik, lying on the S. side of an inlet of the Faxe Fiord, on the S. W. coast; pop. 700. The monies, weights, and measures, are the same as those of Denmark.—(*Edin. Cab. Lib., No. XXVIII., Iceland, Greenland, and the Faroe Islands.*)

ICELAND MOSS, a lichen (*Cetraria Islandica*) common in the N. of Europe and N. America, which yields a nutritive starchy substance, sometimes employed to make bread and gruel. It may be formed into a paste; and from its possessing demulcent qualities, as well as a bitter principle, it is extensively employed in consumption and other diseases, being regarded as a dietetic as well as therapeutic agent.

IMPORTATION. [Customs Regulations.]

IMPRESSMENT OF SEAMEN. The law on this subject is in a very vague and unsatisfactory state. Parliament has never yet, except incidentally, entered upon this subject, probably from a feeling that any legislation regarding it which did not involve the abolition of the practice would be very unpopular. Hence this formidable exercise of the royal prerogative has no better foundation than vague usage, sanctioned by a few decisions of the courts, and restricted by occasional statutes. There have been many discussions as to the origin of the practice, and its legality has often been called in question. The existence of the power, however, though its extent is very obscure, has been held to be acknowledged by the judgments of the courts, and the restrictive clauses in the statutes. Of the exemptions, which are thus the only branch that can be distinctly laid down, the following is a general statement. *1st*, Persons above 55 and under 18, foreigners serving in British merchantmen, and able-bodied landsmen who have joined the sea-service and have not been more than two years attached to it (13 Geo. II. c. 17). *2d*, For every 50 tons of a ship in the coal-trade, one seaman, nominated by the master and certified by a magistrate. This exemption is annual, from 15th April to 1st January (6 & 7 Wm. III. c. 18, § 19). *3d*, Masters of vessels, and others employed in the coast-fishery, according to certain minute provisions in 50 Geo. III. c. 108. *4th*, Harpooners, line-managers, and boat-steerers of vessels in the south-sea whale-fishery (26 Geo. III. c. 50, § 25).

By 4 Geo. IV. c. 24, § 4, all enrolled apprentices were exempted from serving in the navy. That act was repealed by 5 & 6 Wm. IV. c. 19, which is less distinct in its enactments, and which indeed, though professing to consolidate all the laws of the mercantile navy, contains no exemptions from impressment in direct terms. The act declares (§ 39) that "no parish or voluntary apprentice to the sea-service *shall be at liberty to enter into the naval service* during the period of his apprenticeship without the consent of his master; but if, nevertheless, he shall voluntarily enter on board any of his Majesty's ships of war, and shall be allowed by his master to continue therein," the master, on intimating his consent, becomes entitled to the apprentice's wages earned up to the period of the expiry of his indenture. There are clauses for authorizing registered mariners to break their agreements for the purpose of entering the navy, and these also are expressed in such terms as if there were no such practice as that of impressment. The whole statute will be found abridged under the head Seamen.

INCH, in long measure, is the $\frac{1}{12}$th of the foot. In this country it was anciently subdivided into 3 barley-corns, but now more commonly into eighths or tenths. In superficial measure, however, it is divided into 12 lines or parts, each part into 12 seconds, and each second into 12 thirds. These are called duodecimals.

INDIA (BRITISH). Under this head we intend to describe the territories of the East India Company in Hindostan, and the adjoining regions on the Asiatic continent; noticing generally at the same time, however, the native states in those countries which are under British protection, as well as the few that still remain independent; as our possession (with trifling exceptions in favour of Sinde and some European powers) of the whole coast, from the mouth of the river Indus on the W., to the extremity of the Bay of Bengal on the E., enables us to exercise a sort of commercial dominion over the whole. These regions, comprising, with the foregoing exceptions, all Continental India, may be generally defined as extending from the Himmaleh mountains on the N. to Cape Comorin in the Indian Ocean on the S., and from the Indus on the W. to the Burmese territories on the E.,—the extent and population of the whole being as follows:—

	Area in square miles.	Population.
Presidencies of Bengal, Madras, and Bombay, including the acquisitions from the Burmese in 1826,	630,000	83,300,000
States under British protection,*	550,000	40,000,000
Nepaul, Lahore, and other independent states,	177,000	11,000,000
Total,	1,357,000	134,300,000

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* Exclusive of the recent conquests in Cabul and Afghanistan.

The Company's Settlements of Malacca, Penang, and Singapore, and the Crown Colony of Ceylon, commonly included in British India, are described under their respective heads; while under East India Company will be found an historical, political, and financial account of that body.

The Geographical Features of India are distinguished at once by their grandeur and their variety. It is, as it were, an epitome of the whole world. Its vast plains present the double harvests, the luxuriant foliage, and even the burning deserts of the torrid zone; the lower heights are enriched by the fruits and grains of the temperate climates; the upper steeps of the Himmaleh are clothed with the vast pine forests of the north; while the highest pinnacles are buried beneath the perpetual snows of the arctic zone.

The main body as it were of India,—the chief scene of her matchless fertility,—is composed of a plain, extending along the entire breadth from east to west, between the Brahmapootra and the Indus, and reaching in point of latitude from the great chain of the Himmaleh to the high tableland of the Southern Peninsula. It thus possesses a length of about 1500 miles, with an average breadth of from 300 to 400. With the exception, perhaps, of the country watered by the great river of China, it may be considered the finest and most fertile on the face of the earth. Of this general character of the Indian plain, the province of Bengal presents the most complete and striking example,—no part of it being diversified with a single rock or even a hillock. The Ganges pours through it a continually widening stream, which, during the rainy season, covers a great extent with its fertilizing inundation. From this deep, rich, well-watered soil, the sun awakens an almost unrivalled power of vegetation, and makes it one entire field of waving grain. Bahar, further up the current, has the same general aspect, though its surface is varied by some slight elevations; but Allahabad, higher still, is mostly low, warm, and fruitful, exactly like Bengal. North of the river, the provinces of Oude and Rohilcund, sloping gradually upwards to the mountains, enjoy a more cool and salubrious climate, and display in profusion the most valuable products both of Asia and Europe. Here the valley of the Ganges terminates, and is succeeded by that of the Jumna, more elevated, and neither so well watered nor quite so fertile. The Doab, or territory between the two rivers, requires in many places artificial irrigation. Its woods, however, are more luxuriant; while the moderate cold of its winter permits a crop of wheat or other European grain to be raised, and the summer is sufficiently hot to ripen one of rice. To the south of the Jumna, and along the course of its tributary the Chumbul, the ground is broken by eminences, extending from the hills of Malwa and Ajmere; while, even amid its most level tracts, insulated rocks, with perpendicular sides and level summits, form those almost impregnable hill-forts, so much celebrated in Indian history. Westward of Delhi begins the Great Desert,—a sandy tract which intervenes between the tributaries of the Ganges on the one side, and the Indus and its tributaries on the other, and which is refreshed only by a few small rivulets that spring up and disappear amid the waste. This entire region, about 600 miles long and 300 broad, presents an aspect nearly similar to the most dreary parts of Arabia and Africa. To the north and north-west of this barren tract, however, lies the plain of the Punjaub (subject to the Rajah of Lahore), where the five tributaries of the Indus, rolling their ample streams, produce a degree of fertility equal to that of the region watered by the Ganges. High cultivation, too frequently obstructed by public disorders, is alone wanting to make it rival the finest portions of the more eastern territory.

Throughout nearly the whole of this vast plain, the wants of the population and the demands of commerce have superseded the original productions of nature; and, even under the most careful management, few of those exquisite shrubs are now reared, which have given such celebrity to the vegetable kingdom of the east. Its staples consist of solid, rich, useful articles, produced by strong heat, acting on a deep, moist, and fertile soil,—as rice, the eastern staff of life, sugar, opium, indigo,—and, in the drier tracts, cotton. Such an entire subjection to the plough and the spade, joined to the want of variety in the surface, gives to this great central region a tame and monotonous aspect.

The Deccan or Southern Peninsula presents none of those singular features which distinguish the great central plain and its northern boundary. Hills, occasionally rising to the rank of mountains, and enclosing table-lands of various elevations, diversify its surface, and procure for it at once the climate and vegetation of the tropical and of the temperate zones. But the most prominent feature is a range of heights, corresponding to the triangular form of this part of the continent. The northern border consists of the Vyndhya chain,—a tract of high country stretching from the Gulf of Cambay to the Bay of Bengal, chiefly along both banks of the Nerbudda, and composing the provinces of Malwa, Candeish, and Gundwana, to which has been given the name of Central India. From its extremities extend southward the Ghauts, two parallel chains, which, at a greater or less distance, girdle the whole of the opposite coasts of Malabar and Coromandel.

The Western Ghauts, rising from about 3000 feet in the N. to 6000 feet in the S., stand generally at a small distance from the sea. The chief productions of this district, which includes a great part of the Bombay presidency, are the pepper, vine, betel, and the areca, sago, and cocoa palms; while the highest tracts are crowned by forests of teak. At the boundary of Mysore there crosses the continent a ridge, called the Nhilgerries, the loftiest in all this part of India, having one peak 8700 feet in height, which has lately become an important sanitary retreat. Farther south, the west coast is in general very low, and traversed by numerous streams flowing parallel to the shore, thus affording great convenience for inland navigation.

The Eastern Ghauts, rising behind the Coromandel coast, and including a considerable portion of the Madras Presidency, are generally less elevated, but spread into more numerous branches, and over a wider surface. They leave also a broader plain between them and the sea; yet, unless in the deltas of the great rivers which, from the west, cross the Ghauts and fall into the Bay of Bengal, this space bears somewhat of a naked and arid character. There occur even extensive tracts of sandy soil impregnated with saline substances, which in some degree taint the atmosphere. More to the north, in Orissa and the Circars, the high grounds often advance close to the sea, and consist to a great extent of mountain and jungle, continuing in a more uncultivated state, and peopled by more uncivilized races, than almost any other part of India. Cuttack again, a district approaching the Ganges, is so low as to be liable to frequent inundations from the sea, which in 1830, 1831, 1832, and 1833, broke the barriers and overflowed numerous fields.

These three ranges enclose a table-land, nearly 2000 feet above the level of the ocean, and comprising the main body of Southern India. The south-western tract—the original seat of Mahratta power—forms a hilly country; but the central region, composing the once powerful kingdom of Golconda and Bejapore, comprehends extensive fertile plains, secured by their elevation from the scorching heats which afflict the territory along the coast. The extreme southern district, called the Carnatic, is divided into two table-lands, the Ballaghaut and the Mysore, considerably higher than those of the Deccan, and on that account including a greater variety of climate, soil, and production.

Of the rivers, the largest have their source in the great northern chain of the Himmaleh; and the rest, with few exceptions, in the table-land of Central and Southern India, which is supported by the Ghauts. The following are the chief rivers of India and of the countries which border upon it, with their computed length of course. In Northern India, the Indus and its largest tributary, making together 2000 miles; the Ganges, 1500; the Brahmapootra, 1600; the Jumna, 780; the Ganduck, 450; the Cosi, 300; the Gogra, 300; the Goomtee, 300; the Sone, 300; the Betwa, 300; and the Chumbul, 500. In Southern India there are the Taptee, 460; the Nerbudda, 700; the Mahé, 380; the Saubermutty, 200; the Godavery, 850; the Kistna, 700; and the Cavery, 700.

The Climate of India, though for the greater part situated nearer the equator, is not so hot as that of Arabia or the adjacent countries. The course of the seasons is also more regular and constant, being mostly regulated by those periodical winds called MONSOONS. The south-west monsoon,—the rainy season,—commences with thunder and tempests in Southern India in May or the beginning of June, but later as we advance towards the north; in July the rains are at their height; they afterwards gradually abate till the end of September, when they depart amidst storms as they came. In the beginning of October a change takes place from the south-west to the north-east monsoon. This monsoon is attended with dry weather throughout the Peninsula, excepting on its eastern side, on the coast of Coromandel: on this coast it brings the periodical rains, which last till the middle of December,—heat and drought on the other hand prevailing here from June to October; from December to the end of February, the north-east monsoon continues, but is now every where a dry wind, producing cool and agreeable weather. The north-east winds cease about the beginning of March, from which time to the beginning of June the winds are irregular and the heat great all over the peninsula. The winds are chiefly from the south at this time in the Bay of Bengal and on its shores, and are hot, moist, and relaxing. In general, the healthy season in India may be said to be from November to the setting in of the rains, and the unhealthy season during the period of the rains and a short time after their termination.

The Inhabitants of India, although prominently distinguished from those of other parts of the world, are scarcely less varied among themselves than their soil and climate. The most numerous are those who speak Hindostanee,—a dialect formed on the basis of an ancient Hindoo language by superadding Persian, introduced by the Mohammedan conquerors, exactly as our own language has been formed by the addition of Norman-French to the Saxon. This people occupy the upper valley of the Ganges, and their number is about 31,000,000. The Bengalees, inhabiting the delta of the Ganges, are computed at 25,000,000. In Southern India the most numerous are the Telingas, numbering about 8,000,000. The Tamul nation, in the extreme south, are not less than 5,000,000. To the north of the Telingas we have the Oorias, estimated at 4,000,000. In the south we have two other great nations,—the Carnatas and the Mahrattas,—whose numbers have not been computed. To these great indigenous nations are to be added many minor ones;—a variety of wild and wandering races, with a crowd of foreign settlers or their descendants, as Arabs, Persians, Afghans, Turks of Zagatay, Armenians, Jews, Portuguese, English, and a few French. The most populous district is that watered by the Ganges, the entire valley of which contains about 260 inhabitants to the square mile. Physically viewed, the Indians are inferior in strength and stature to the European race. There is, however, a great diversity of character among them. The Bengalees are the smallest, feeblest, and most timid, though not the least ingenious and industrious. Many of the higher classes of the Hindoos beyond Bengal possess great courage, and this character obtains both to the north and the south; but still docility, incapacity of combination, and attachment to peace, are characteristics of the whole. With these features, it would be extravagance to compare their labour with that of Europeans. On an average the productive power of four natives is reckoned at not more than that of one Englishman, which, indeed, is the proportional rate at which Indian seamen, or lascars, are received into shipping. The labouring classes are wretchedly poor,—the average rate of earnings being only from 5s. to 8s. a-month. They are in consequence forced to have recourse to the lowest species of food; while, as to raiment, a great number have enough only to cover their nakedness,—the male sex a single clout, and the female sex two.

The Productions of the Soil, for the most part, and especially those introduced into the European market, bear a very low value, compared to the same articles raised in the southern and tropical regions of America. This unfavourable distinction appears to arise less from any defect in the land, or even in the species of products, than from the imperfect culture, and the slovenly manner in which they are prepared. Rice is the food of every class except the lowest, and its production, generally speaking, is only limited by the means of irrigation, which is essential to its growth. The ground is prepared in March and April; the seed is sown in May; and the produce reaped in August. If circumstances are favourable there are other harvests,—one between July and November, another between January and April, consisting sometimes of rice, but more commonly of other grain, pulse, or cotton. In the higher territories, sloping upward to the Himmaleh, wheat and barley prevail. Holcus or millet is also largely cultivated on inferior lands, and as an intermediate crop; and this with pulse, to which are added even vetches, wild roots, and herbs, constitutes the chief food of the labouring class. In Guzerat some species of holcus are raised to a considerable extent. But now the chief commercial product of India is opium,—an article produced almost exclusively in the central dictricts, especially Bahar, Benares, Patna, and Malwa, a full account of which will be found elsewhere. [OPIUM]. Cotton is also an article of great importance, being used for the clothing of a large proportion of the people. That of Dacca, selected for its muslins, is the finest in India, and perhaps in the world; but it is limited to a range about forty miles long and three broad, along the banks of the river Brahmapootra. Attempts were made to spread it by distributing plants in other districts, but without success. The largest crops are raised in the Doab and others of the upper Gangetic provinces, from which Bengal is almost entirely supplied; but the best qualities are found in the Nagpore district, and in the vicinity of Surat and Bombay. These, however, have continued to be inferior to the American, as they are rendered almost unmarketable by their foul state, being mingled with dirt and seed. Great exertions have been made by the Company to improve the quality; and, since 1829, they have redoubled their efforts, ordering experimental farms to be established, and sending out seeds of the American and Egyptian species, also cleaning implements, particularly the American saw-gin. Its application appeared at first completely successful; but it was soon found that it shortened the staple. It appears on the whole, however, that European superintendence, with an improvement in the native modes of cleaning and packing, has of late raised the value. Silk is another material native to India; and, though its actual culture is not so widely diffused as that of cotton, it could probably be produced in almost any desired quantity. Cossimbuzar, Commercolly, and Rungpore are at present the principal districts whence it is derived.

Sugar is an article extensively raised and consumed in India, chiefly in the form of sweetmeats; and the whole quantity used has been estimated at 480,000 tons; it is grown chiefly in the upper part of the valley of the Ganges and in Guzerat. That used by the natives consists mostly of a foul mass, in which the molasses are still included; and only a certain portion is manufactured in a state imperfectly granulated. The variety drawn from different species of the palm is preferred in the south of India, being less costly, though coarser. Considerable exertions have been made by the English to improve the manufacture of sugar; and the Otaheite cane, considered decidedly the best, and generally grown in the West Indies, has been introduced. Tobacco has been planted by Europeans, and is in general use. The chief other products are,—indigo, extensively grown along the alluvial tracts of Bengal, bordering on the Ganges; pepper, raised amid the wooded hills of Malabar and Canara; saltpetre, an article of which Bengal, from some peculiarity in its soil and climate, enjoys nearly a monopoly, being particularly abundant in the province of Bahar, and giving value to arid and steril soils unfit for cultivation; and wool, which was always produced, though, till lately, of very inferior quality. In the territory of Bombay it has been remarkably improved.

Our information regarding the mineralogy of India is defective. Coal exists in various places; the most remarkable field is that of the Damoda, a deposit worked in pits at a place about 40 miles N.E. of Raghunathpur, the produce of which is now consumed in Calcutta. Iron, copper, lead, and other metals, occasionally present themselves, but their produce is trifling. Precious stones, especially diamonds, are likewise found in certain districts.

The Manufactures of India have enjoyed a high reputation from the earliest antiquity. The country containing a great number of inhabitants who are extremely poor, and a few who are immensely rich, a demand is created on the one hand for a great mass of coarse fabrics, and on the other for a small quantity that are exquisitely fine. To exhibit themselves in splendid robes is a favourite object of oriental luxury; accordingly, the produce of the loom had reached a perfection to which that of no other country, except Britain, and that very recently, could make even an approach. The delicate and flexible form of the Hindoo, the pliancy of his fingers, and the exquisite sense with which they are endowed, even his quiet indefatigable perseverance, all render him peculiarly fitted for this description of employment. The muslins of Dacca in fineness, the calicoes and other piece goods of Coromandel in brilliant durable colours, have never been surpassed; and yet they are produced without capital, machinery, division of labour, or any of those means which give such facilities to the manufacturing skill of Europe,—the weaver being merely a detached individual, with a loom of the rudest construction, consisting sometimes of a few branches of trees or bars of wood roughly put together. The demand for these fine muslins and calicoes, however, has within the last fifty years greatly decreased, owing partly to the fall of so many splendid courts where alone remunerating prices could be obtained, but mainly to the competition of the cheap imitations of these fabrics, which are imported from Manchester, Glasgow, and Paisley. The only cloths that now meet a sure sale are those coarse cotton robes, woven in almost every inland village, for the use of the common people. The sole other manufacture deserving of notice is that of silk, which is also of great antiquity in India, and carried to considerable perfection, though not nearly equal to that of cotton. Bandanas and other handkerchiefs, crapes and taffetas, are the forms in which it is chiefly produced. The shawls of Cashmere, worked on the northern border of India from the wool of a species of goat, are also highly prized in every quarter of the world.

The Inland Trade comprehends not only the intercourse between one portion of the British dominions and another, and the trade of the latter with the tributary and independent states of Hindostan, but also the trade along a land frontier of about 2000 miles, with Sinde, Cabul, Lahore, Nepaul, Bootan, and the Burmese dominions; there being very few foreign or tropical productions which these nations, the last excepted, can receive but through their connexion with us.

This internal intercourse, however, is much impeded by the defective means of communication. What are called high-roads are in general little better than broad and bad pathways; while the number of bridges, in a country intersected by so many rivers or streams, is small, and the few that exist are miserable. Of late considerable exertion has been made by the Company to remedy these deficiencies, especially in Bengal; and several extensive roads have been recently (1841) completed —as the grand trunk-road from Calcutta, extending 770 miles through Bengal and the upper provinces; the Jugurnath road, connecting Orissa with Bengal; the road from Calcutta to Kishnagur; that from Silhet to Gowhatty in Assam; and the Deccan road from Mirzapore to Jubbulpore, besides various others,—all being without tolls; but, taken as a whole, what has been accomplished is trifling compared with what is required. Few of the rivers are navigable for considerable shipping further than the range of the oceanic tide; and, although there is throughout the plain of the Ganges, as well as on the rivers of the south, a considerable inland navigation, somewhat similar to what would in this country be called canal-navigation, yet much of that, even of the larger rivers, is impracticable every where, except during the four months of the rainy season, while even during that season it is of little avail for the return trade from the coast. The greater part of the inland trade of India must therefore be conducted by land, and hence the importance of good roads, which would be practicable at all seasons and in every part of the country. Goods are conveyed partly in very rude cars drawn by oxen, but much the greater proportion are carried by pack-bullocks. On the north-west frontier camels and horses are used; and in the northern mountains small horses and even goats are employed. In all the hilly districts porters are still more in use than any description of cattle. The charge for carrying goods by land in the plains averages about 56s. per ton per 100 miles; and, by the Ganges, about 2s. per ton. Thus the cost of conveying merchandise 100 miles by land in India is equal to more than one-half the cost of conveyance from Calcutta to London; and the rate of freight is three times as much on the Ganges as between London and Calcutta.—(*Commerce, Money, and Banking of India*, p. 22.)

The source of the internal trade of India is, like all others, the difference in the character of the productive industry of the several countries and districts carrying it on. The principal articles are corn, cotton, oil-giving plants, and sugar, salt, indigo, opium, silk, tobacco, saltpetre, drugs, hides, lime, and timber. By far the greater part of the salt is produced on the coast, or imported landways from foreign countries; it is chiefly paid for in corn. The cotton, sugar, and other articles are paid for either in the tropical productions of the coast, or in foreign commodities, principally consisting of the areca-nut, spiceries; the metals, iron, zinc, tin, copper, and lead; woollens and cottons. Until lately the whole inland trade of British India was subject to transit duties. These have been wisely abolished within the Bengal provinces; and if they are not, ought to be discontinued in our other possessions, where their operation is known to have been still more pernicious. There remain for abolition the monopoly of the manufacture and sale of salt, and of the culture of the poppy, and the preparation and sale of opium,—imposts which yield an annual revenue of about two millions.

The External Trade of India is carried on with the following countries, which are given in the order of their relative importance:—Great Britain, China, Persian and Arabian Gulfs, Eastern Islands and Peninsula, France, United States, other continental nations of Europe than France, Cape of Good Hope and Mauritius, South America, and Australia. An account of the course of trade at the three principal ports is given below; but there are no public documents which afford a comprehensive view of the whole amount of the foreign imports and exports. In the work above referred to, however (p. 39), the quantities and values of the staple articles of foreign export are estimated as follows:—Opium, 24,000 chests, each of 140 lbs, £2,880,000; indigo, 10,000,000 lbs. £2,500,000; cotton wool, 100,000,000 lbs. £1,500,000; cotton manufactures, £250,000; raw silk, 1,600,000 lbs. £950,000; silk manufactures, £200,000; corn and grain, 468,750 quarters, £375,000; sugar, 16,000 tons, £256,000; saltpetre, 14,000 tons, £160,000; Total, £9,071,000.

The principal commercial relations of India are, as we have already stated, with Great Britain. An account of the progress of the trade up to the renewal of the Company's Charter in 1833 has been already given [East India Company]; and the following tables exhibit the amounts of the imports and exports for a series of years since that event.

Quantities of the Principal Articles of the Produce and Manufacture of India Imported into the United Kingdom from 1834 to 1839.

	1834.	1835.	1836.	1837.	1838.	1839.
Cotton wool..........lbs.	32,920,865	41,429,011	75,949,845	51,532,072	40,217,734	47,172,939
Cotton goods..........pieces	268,877	293,580	368,160	414,450	204,271	348,446
Raw silk..........lbs.	1,798,637	1,105,297	1,450,222	1,298,037	1,151,399	1,387,944
Bandanas, &c..........pieces	375,234	332,002	332,393	504,452	492,966	477,482
Indigo..........lbs.	3,616,022	3,878,404	7,222,331	5,721,554	6,579,142	4,654,226
Lac, shellac..........lbs	1,637,518	1,708,389	1,919,572	3,185,498	3,753,006	4,342,729
Sugar..........cwt.	101,997	137,975	171,757	302,945	474,100	587,149
Pepper..........lbs.	7,131,133	2,807,014	6,777,892	4,150,534	3,326,990	9,090,898
Saltpetre..........cwt.	257,680	194,119	177,937	222,606	234,047	272,428
Rice..........cwt.	276,968	233,041	145,180	352,833	203,895	419,319
Castor oil..........lbs.	685,457	1,107,115	972,552	957,165	837,143	916,370

The chief other articles are sheep's wool, coffee, ginger, rum, gums, drugs, and skins.

Declared Value of Articles, the Produce or Manufacture of the United Kingdom, Exported to the Territories of the East India Company and Ceylon in the same Years.

	1834.	1835.	1836.	1837.	1838.	1839.
	£	£	£	£	£	£
Apparel, &c..........	27,646	41,502	67,921	50,608	61,945	77,728
Arms, ammunition..........	29,880	53,769	46,985	54,259	46,062	74,597
Beer, ale..........	52,049	64,381	82,636	82,124	75,544	110,402
Cotton manufactures..........	959,221	1,368,954	2,020,343	1,558,693	1,805,449	2,314,754
Cotton twist, yarn..........	315,583	432,821	561,878	602,293	640,205	690,916
Glass wares..........	77,002	109,702	129,796	100,841	84,209	74,986
Iron, steel..........	104,340	144,796	134,893	137,294	137,707	190,468
Hardware, cutlery..........	48,756	60,838	86,671	79,141	60,363	70,677
Brass and copper goods..........	345,561	316,120	350,292	328,547	303,132	329,367
Machinery..........	35,992	12,524	7,550	7,402	29,869	75,948
Linen manufactures..........	17,238	21,805	40,481	32,155	36,240	57,634
Woollen do..........	25,697	216,300	324,670	225,679	204,900	190,056
Other articles..........	539,604	349,180	431,714	353,939	390,631	491,786
Total	2,578,569	3,192,692	4,285,829	3,612,975	3,876,196	4,748,607

Of the articles not specified the chief are plate, watches and jewellery, books and stationery, earthenware, lead and shot, coals, leather and saddlery, silk-manufactures, and tin-wares.

The returns for 1840, so far as published, are still more favourable; the declared value of British produce and manufactures exported amounting to no less than £6,023,192; and the imports of cotton-wool to 76,703,295 lbs.: while in 1841 the latter were again increased to 87,463.584 lbs.

The commercial intercourse between Great Britain and Hindostan, though thus considerable, is yet, we believe, of small amount compared to what it is destined to become. Hitherto, with some recent exceptions, there has been a strange propensity on the part of our statesmen to subject India to many and great disadvantages as to trade, and pertinaciously to refuse to treat it as a member of the empire, one and indivisible in respect to rights and interests. The discriminating duties, so long continued upon sugar and rum for the advantage of the West India planters, have been repealed on Bengal and Madras sugar. But they are still maintained upon the sugar produced in other parts of India, and upon tobacco, coffee, and some minor articles; while again, India is far from being placed on a footing of reciprocity as regards the admission of her manufactures into Great Britain. Thus the cotton and silk piece goods of England are imported into Calcutta at a duty of 3½ per cent.; while the cottons of India, brought to a British port, pay in no case less than 10 per cent.; and in regard to Indian silk piece goods the inequality is still greater,—they being subjected in British ports to a duty of 20 per cent. This heavy duty on India silks is felt chiefly on the white silk handerkchiefs called corahs, which might be largely introduced into this country for printing and home consumption. The heavy duties levied in England on Indian drugs and spices, amounting to from 100 to 300 per cent. on their value, is also much complained of by the Directors of the Company (*Lords' Report on Petition of E. I. Company*, 1840: *Par. Paper*, No. 353). But it is perhaps impossible to give a stronger proof of the unfavourable light in which our statesmen have viewed India than the simple fact, that the term "British possessions," in acts of parliament, tariffs, and the like, has been always held to be exclusive of that splendid portion of the British dominions, merely because it is governed through the instrumentality of the East India Company. The crown colonies, taking their cue from the conduct of the mother country, have also regarded their sister dependency as an alien, treating goods imported from British India as "foreign," and, as such, subjected to much higher duties than when brought from other colonies or from the United Kingdom. The invidious distinction, however, has been modified by a late order in council, which ordains that the duties now levied at the Cape, Ceylon, Australia, and New Zealand, upon articles the produce and manufacture of British India, shall be reduced or altered to the same rates as are now imposed upon similar articles the produce or manufacture of the United Kingdom, or of other British possessions.—(*London Gazette*, May 1841.)

The capabilities of India have hitherto been but imperfectly known in Europe; and indeed, until the Act of 1833, which prohibited the East India Company from trading, and gave to British-born subjects the right to settle for commercial and agricultural purposes in the Company's possessions, there was but little inducement to pursue that line of inquiry. Since that right has been conceded, the attention of the public has been forcibly drawn to the subject; and the improved fiscal treatment of India, indicated by the facts we have stated above, —the recent extension of the banking system in that country,—and its increasing demands for our manufactures,—are evidences of the awakened intelligence which now guides the enterprise of England in her intercourse with her Eastern empire. The low quality and small exportable quantity of the cotton, sugar, silk, tobacco, and other productions of those noble possessions, are mainly attributable to one cause. India is miserably poor. What Mr Rogers said to a late Parliamentary Committee with respect to silk is true in regard to nearly all the other articles of raw produce. "There is not sufficient private capital, or private credit in India, to produce one-twentieth part of the silk that the country is capable of producing" (*Par. Paper*, 1840: Evidence, Q. 4350). To remove this poverty, no means should be spared to afford to the public an increased knowledge of the openings, the inducements, and the safeguards for and attending the investment of capital in India. Guided by this, and the wiser commercial legislation now being recognised and adopted, no doubt could be entertained of the success of British skill and capital in improving both the quantity and quality of the chief Indian staples, and thereby raising quickly and greatly her value as a customer, by augmenting the funds with which she pays for British merchandise.

The advantages which we derive from our colonies are usually estimated by the value of our manufactures which they purchase. India, as we have shown, buys our manufactures to a large and increasing extent. But India is more than a customer. The circumstances in which she is placed by us render her in a manner tributary to a large amount. Defraying from her own resources the whole charges of her internal government and military defence, subjected to the rule of British-born subjects in all the higher and more lucrative and honourable offices of the state, India, without any return, except in the small value of military stores, further transmits annually to this country, on account of the "home expenditure" of the East India Company, a sum which their secretary, Mr Melville, estimates at not less than £3,200,000.[*] This sum is in fact the price which India pays for the connexion which subsists between her and England; and there is no doubt that the great bulk is fairly due by her, as it is right that she should pay the legitimate expenses of her administration. Nor are the advantages of her relations to England dearly purchased even at this high price; especially if we allow ourselves to anticipate with confidence the adoption of a juster and more liberal policy towards this noble dependency than has been hitherto practised. Besides this £3,200,000, it has to be noticed that the amount of private fortunes, transferred from India to this country, is estimated at from £500,000 to £750,000 a-year; making the amount of public and private remittances from India, for which Great Britain gives no return except to a small extent in military stores, nearly £4,000,000 per annum.

TRADE OF THE PRINCIPAL PORTS.

CALCUTTA.

Calcutta, the capital of Bengal, and seat of the supreme government in India, is situated in lat. 22° 34′ N. and long. 88° 17′ E., on the east side of the Hoogley, one of the branches of the Ganges, about 100 miles from the sea. It extends nearly 4 miles along the river, with an average breadth of 1½ mile. The northern quarter, or the Black Town, inhabited by the native population, consists of narrow, dirty, unpaved streets, chiefly of mud hovels; the whole deep, black, and dingy, and offering a complete contrast to the front parts possessed by Europeans. These last generally present handsome detached brick houses, which, being stuccoed, have so elegant an appearance that Calcutta is sometimes called "the City of Palaces" and "the Indian Corinth." The stupendous fortification of Fort William is situated about one-fourth of a mile below the town; and the intervening space, called the Esplanade, contains the magnificent residence of the governor-general. Adjoining the esplanade and the river-bank of the city is the "Strand,"—a quay extending between 2 and 3 miles, and contiguous to which there is anchorage for ships of 600 tons; while Diamond Harbour, about 30 miles below, is sufficiently deep for the largest vessels. The access to the port is intricate, owing to shifting banks of sand and mud; but this disadvantage is outweighed by its ready intercourse, through the Ganges and its tributaries, with the richest and most populous regions of Hindostan, and which, joined to its being the place of chief resort of civil and military functionaries, have rendered Calcutta the principal commercial emporium of the east.

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[*] Chiefly consisting of dividends on India stock and debt, pensions to retired officers, claims on account of Queen's troops in India, charges of home establishments, and stores exported.

The external trade of Calcutta is exhibited in a series of tables, originated by Professor Wilson, and, since his departure, continued by Mr Bell. From these have been drawn up the following progressive view of the imports and exports since the opening of the trade.

Imports.	1814-15.	1827-28.	1837-38.
	£	£	£
Copper and nails.	196,620	399,208	294,840
Iron...........	37,042	61,347	96,154
Ironmongery..			18,193
Lead............	4,531	17,695	18,107
Tin..............	24,769	34,580	56,593
Tutenague........	80,206	....	....
Quicksilver.......	12,516	2,949	769
Spelter...........	....	119,574	25,418
Madeira wine.....	96,150	15,347	4,700
Claret...........	55,660	38,386	21,600
Port............	36,606	11,126	4,414
Sherry, Champagne, &c......	....	41,330	36,996
Spirits...........	33,240	50,568	18,743
Malt liquors.....	....	36,062	48,009
Woollens.........	9,941	268,516	94,400
Cotton piecegoods	44,481	561,404	632,952
Cotton yarn, &c..	....	188,484	512,256
Haberdashery, &c.	18,070	65,098	50,562
Books and Stationery......	14,705	47,226	42,609
Glassware.........	28,840	97,880	29,670
Hardware, cutlery, &c.............	....	30,747	33,731
Jewellery.........	....	68,620	33,060
Paints and oil....	....	37,859	4,158
Groceries, &c....	18,053	40,899	12,660
Timber and spars	50,950	36,274	45,400
Cordage and coir.	16,166	17,844	6,531
Tea & China goods	46,392	30,245	33,927
Pepper and spices	41,720	53,980	73,972
Coffee...........	....	....	9,628
Salt.............	....	....	134,901
Sundries.........	299,062	426,508	590,836
	1,165,720	2,799,756	2,985,789
Treasure.........	1,076,967	1,352,969	1,084,161
Total	2,242,687	4,152,725	4,069,950

Exports.	1814-15.	1827-28.	1837-38.
	£	£	£
Cotton piecegoods	849,560	275,616	69,625
Silk do.......	....	251,890	378,796
Cotton..........	456,066	326,286	186,116
Silk.............	331,271	855,398	465,451
Indigo...........	724,934	1,917,160	1,124,768
Sugar...........	211,469	175,605	671,891
Saltpetre........	19,264	148,799	263,286
Grain............	135,956	246,614	286,967
Flour............	....	....	6,429
Opium..........	917,650	1,210,680	2,129,238
Castor oil........	....	....	12,544
Ginger..........	....	2,898	22,051
Borax..........	....	1,847	9,852
Lac, lake........	19,473	85,288	40,364
Shellac, &c......	12,680	22,036	109,392
Shawls, &c......	9,662	6,689	16,758
Bengal rum......	14,454	840	7,526
Gunny bags.....	....	17,200	38,340
Hides, skins.....	....	....	80,321
Safflower........	....	....	21,841
Linseed.........	....	....	9,120
Sundries.........	150,615	108,657	197,266
Re-exports......	233,218	299,207	324,959
	4,086,272	5,952,710	6,472,907
Treasure........	15,463	448,099	31,688
Total	4,101,735	6,400,809	6,504,595

In these tables we observe a general increase, and likewise remarkable variations respecting particular articles. In the imports, cotton stuffs and yarn have been, the former nearly, the latter wholly, created under the free trade; and they now form by far the most considerable branches. Woollens have varied strikingly. Wine has been materially diminished, and at the same time a great alteration of taste exhibited. Madeira, formerly the favourite beverage, is now only introduced with the view of being returned to Europe, improved by the climate and voyage. Port, too, and even claret, have been largely superseded by sherry, champagne, and other white wines. Among metals, there has been a steady demand for copper, which is the material used by the natives in making cups and vessels for water. Iron, lead, and tin have much increased. The tutenague of China has been superseded by spelter or zinc, which is cheaper. Timber and cordage fell off during a certain period, owing to the discontinuance of shipbuilding in Calcutta, but the former has materially revived.

In regard to exports, it is impossible not to remark the great diminution in cotton piece goods, which, in the first year, ranked second only to opium. This drug, with indigo, sugar, saltpetre, and lac-dye, have all considerably advanced. The trade in hides did not exist before 1827.

The following table shows the course of business in respect to the countries with which it is conducted, comparing the years 1816-17 and 1837-38. The first has been chosen on account of the interval which had then elapsed after the opening of the trade, during which different nations attempted to establish an intercourse with India, which several of them, however, have been unable to maintain.

	1816-17.		1837-38.	
	Imports.	Exports.	Imports.	Exports.
Europe.—Britain	£805,111	£1,380,696	£2,052,833	£2,701,358
Holland	12,192	29,513	....	....
France	13,242	83,299	103,791	221,806
Denmark	583	1,464	....	....
Sweden	....	....	....	....
Spain	....	70,831	3,993	10,673
Portugal	36,763	463,453	....	....
Asia.—Coromandel Coast	62,840	125,049	87,359	115,439
Ceylon	4,518	18,995	8,387	5,039
Malabar Coast	74,515	378,520	170,938	277,122
Maldives, &c	16,873	9,673	13,259	4,733
Red Sea and Persian Gulf	91,079	443,277	85,942	157,387
China	317,038	1,067,896	122,464	2,054,378
Singapore Penang and Malacca	85,949	149,718	187,039	382,523
Java and Sumatra	133,436	93,857	1,856	14,714
New Holland	5,982	33,850	2,434	32,665
Pegu	33,187	15,536	68,150	141,547
Manilla	18,925	125,066	....	....
Africa.—Mauritius	61,049	204,643	2,028	154,905
Bourbon	....	....	13,405	55,670
Cape and St Helena	3,365	34,044	5,951	20,192
America.—South	6,243	169,495	23,639	2,019
North	96,710	599,825	32,321	120,737
	£1,879,600	£5,498,700	£2,985,789	£6,472,907
Treasure	3,819,126	16,900	1,084,161	31,688
Total	£5,698,726	£5,515,600	£4,069,950	£6,504,595

This table, too, suggests some interesting observations. The intercourse with Portugal and Spain, which was at one time very extensive, has entirely ceased. The wines of the former are no longer in fashion, and the activity of British merchants enables them to supply these countries with Indian produce more cheaply than by their own direct navigation. The same appears the case in regard to Holland and the other northern states, except to a small extent with Sweden. France alone, among European powers, holds a considerable and increasing traffic; receiving indigo, saltpetre, and lac-dye, and giving her wines with a large balance in money. The trade has also declined with the United States, which produce no commodities suited to the Indian market, and in exchange for the indigo and silk can give only bullion or goods procured elsewhere. South America, again, has fallen almost to nothing. In respect to China, the imports are small and still diminishing, the exports large and increasing. The latter consist chiefly of opium and cotton, in return for which are received tea, ornamental goods, and quicksilver. From the Eastern Islands are imported the gold of Borneo and Sumatra, spices, tin, drugs, now almost entirely through Singapore. From Coromandel are obtained chanks, an ornamental shell much used in temples, cottons, and silks; from Malabar, teak-timber, coir for cordage, cowries from the Maldives; from the Arabian and Persian Gulfs, almonds, dates, coffee, pearls. These different branches have not increased, but rather diminished; and it is stated that a direct trade has been opened between Britain and many of those places with which intercourse was formerly carried on through Calcutta.

The following are given as the amounts of the imports and exports of subsequent years:—

	1838-39.	1839-40.	1840-41.
Imports	£4,140,579.	£5,065,918.	£5,867,767.
Exports	6,480,080.	7,040,611.	8,369,329.

The amount of shipping which entered Calcutta in the year 1837-38, expressed in tons, was as follows:—British, 130,181; Native, 9,339: French, 16,137; Swedish, 262; Dutch, 1,261; American, 4,256; Arab, 6,303; Burmese, 596; Moorish, 919; total, 169,254 tons, and 563 vessels. Of the British ships, 135, burthen, 66,008 tons, were from the United Kingdom.

Bombay.

Bombay, the western capital of British India, is situated in lat. 18° 55′ N., long. 72° 53′ E., on a small island of the same name, separated from the mainland by a narrow strait, and connected with the larger island of Salsette by a causeway; pop. 230,000, of whom 13,500 are Parsees. It is strongly fortified, particularly towards the sea, and its harbour is the finest in India, being unequalled for safety; while it is the only important one where the rise of tide is sufficient to allow the formation of docks. The buildings connected with these docks are greatly admired for their architectural beauty; and the slips and basins are calculated for vessels of any size. They lie within the fort, and, though the property of the Company, are entirely under the management of Parsees, by whom many large vessels, including frigates and line-of-battle ships, have been built from teak-timber, supplied from the forests of Malabar and Guzerat. The Parsees are also the principal proprietors and merchants on the island, and a great part of the capital even of European houses is supplied by Parsee partners.

The trade of Bombay is very considerable. The great export of Indian cotton to England is from this port, to which the cotton from Oomrawattee and the Deccan, formerly carried to Calcutta, via Mirzapoor, is now brought. About two-thirds of the whole trade between India and China, so far as export is concerned, is now also carried on from Bombay [China]. The goods sent to China comprise principally opium and cotton-wool. The imports from the United Kingdom consist principally of British manufactures and metals, the greater part of which, with sugar and other goods, the produce of Bengal and China, are re-exported in small vessels to all the ports on the western side of India, and to the Arabian and Persian Gulfs,—the returns being made in cotton-wool and cloths; timber, oil, and grain from the northern ports of India; from the south, cotton, hemp, coir, timber, pepper, rice, and cocoa-nuts; and from the Arabian and Persian Gulfs, raw silk, copper, pearls, galls, coffee, gum-arabic, copal, myrrh, olibanum, bdellium, assafœtida, dried fruits, horses, and bullion. The exports to Great Britain consist of Persian silk, cotton-wool, spices, gums, and drugs; those to Bengal are timber, coir, cocoa-nuts, sandal-wood and cotton.

The inland trade with Central Asia, owing to the unsettled state of Afghanistan and the heavy duties levied by the Ameers of Sinde at the mouth of the Indus, has hitherto been comparatively trifling, having been conducted by means of a tedious and expensive land-route through Surat. But the recent British conquests in Cabul and Afghanistan, and the navigation of the Indus by steam, will, it is believed, erelong render Bombay the seat of an extensive commerce, not only with these countries, but with the northern regions of Hindostan.

In the year 1836-37, the imports into Bombay amounted to £3,376,720 value in merchandise, and £1,347,837 in treasure; in all, £4,724,557. The commodities were chiefly from—the United Kingdom, £1,324,191; France, £52,585; Malabar, £758,067; China, £400,566; Bengal, £253,810; Arabian and Persian Gulfs, £233,010; Cutch and Sinde, £157,209; Penang and eastward, £71,772; Coast of Africa, £34,953; Goa, Diu, and Demaun, £39,403: the treasure was brought almost wholly from China. The exports amounted to £5,784,990 in merchandise, and £205,607 in treasure; in all, £5,990,597. Of the former, there were sent to China, £3,266,625; United Kingdom, £1,352,932; Arabian and Persian Gulfs, £470,468; Cutch and Sinde, £232,735; Malabar, £120,704; Bengal, £112,678; Penang and eastward, £68,574; Coast of Africa, £59,333: the treasure was sent mostly to Malabar and Coromandel.

The amounts of the imports and exports in subsequent years were as follow:—

	1837-38.	1838-39.	1839-40.	1840-41.
Imports......	£4,164,327.	£4,778,739.	£3,434,466.	£5,160,769.
Exports......	4,260,416.	4,814,616.	4,043,116.	5,577,315.

Of the imports in 1840-41, £1,946,200 were from Britain,—the increase being chiefly in piece goods.

The shipping entered inwards in 1837-38 amounted to 202 vessels, burthen 91,187 tons. Of the tonnage, 87,001 was under British colours, including 38,889 from the United Kingdom.

MADRAS.

Madras, or Fort St George, situated on the Coromandel coast, in the Bay of Bengal, in lat. 13° 4′ N., and long. 80° 16′ E., is the capital and principal commercial city of Southern India; pop. 462,000. It possesses no harbour, but only an open roadstead, ill adapted for trade, in consequence of the rapid current which runs along the coast, and the violent surf which beats against the shore. This last is so dangerous that ordinary ship boats do not approach beyond the back of the surf, where their lading is transferred to a peculiar kind of Madras boats, which yield to the shock without breaking when thrown upon the beach. The whole of the town is inhabited by natives, except one handsome street in the north-east quarter, which contains the dwellings of Europeans, though the greater part reside in garden-houses in the suburbs.

The trade of Madras is much less extensive than that of either Calcutta or Bombay. In the tables for the year 1836-37, the latest published, the imports in that year are stated to amount to £1,056,233 value in merchandise, and £456,352 in treasure; in all, £1,512,585. The former was chiefly from the United Kingdom, £271,532; Bengal, £200,593; Bombay, £158,135; Pegu, £135.028; Ceylon, £94,216; France, £25,494, and French ports in India, £35,672; Travancore, £38,421; Tranquebar, £25,700; China, £17,470; Penang and eastward, £23,739: the treasure was chiefly brought from Bombay and Bengal. The exports in the same period amounted to £2,210,785 value in merchandise, and £574,690 in treasure; total, £2,785,475. The goods were sent chiefly to Bombay, £766,214; United Kingdom, £476,720; China, £270,063; Ceylon, £183.538; Bengal, £110,207; Arabian and Persian Gulfs, £117,407; Penang and eastward, £126,630: the treasure was sent mostly to Bombay.

MEASURES, WEIGHTS, MONEY, BANKS, DUTIES, &c.

MEASURES AND WEIGHTS.

These vary greatly in different districts, and the only general standards are the weights derived from the new tola or sicca, of late used in the Company's tables of duties. These weights are as follows:—

8 ruttees = 1 musha = 15 troy grains.
12 mushas = 1 tola = 180 troy grains.
80 tolas = 1 seer = 2½ lbs. troy, or (2·057 lbs.) nearly 2 lbs. 14⅝ drams avoirdupois.
40 seers = 1 maund = 100 lbs. troy, or 82²⁄₇ lbs. avoirdupois.

The maund of 80 tolas to the seer is thus almost exactly equal to the Calcutta bazar maund; in the latter the seer is reckoned at 80 siccas, estimating however each sicca at 179⅔ troy grains.

Grain is usually sold by weight throughout India, as also liquids, except at Calcutta, Madras, and Bombay, where wines and spirits are sold by Imperial measure.

The following are the principal local standards:—

Calcutta.—The guz of 2 cubits = 1 Imp. yard; the corge of cloth is 20 pieces; the Bengal common coss or mile = 2000 yards. [Coss.]

The biggah of 20 cottahs = 1600 sq. yds.; and 30¼ biggahs = 10 Imp. acres.

The factory maund of 40 seers, or 640 chittacks = 74⅔ lbs. avoirdupois; and 3 factory maunds = 2 cwt.; the bazar maund, similarly divided, = 82²⁄₁₅ lbs. avoird.; 10 bazar maunds = 11 factory maunds.

Bombay.—The guz = 27 inches.

The maund of 40 seers = 28 lbs. avoird.; the candy of 20 maunds = 5 cwt.; reckoned for grain at 25 Winchester or 24¼ Imp. bushels.

At *Surat*, the candy of 20 maunds, each of 40 seers, = 746⅔ lbs. avoird.

Madras.—The covid = 18⅗ inches; but the cloth measure is the Imp. yard.

The cawney of 24 maunies = 57,600 sq. feet, or about 1 acre 1 rood 11½ poles.

The garse of 80 parahs, 400 marcals, or 3200 measures = 300,000 cubic inches, or about 16⅞ Imp. quarters, estimated by weight at 9256¼ lbs. avoird.

The maund of 8 vis, or 320 pollams, = 25 lbs.

avoird.; and the candy of 20 maunds = 500 lbs. avoird.

MONEY.

The integer of account throughout India is the rupee, which is generally divided into 16 annas each of 12 pice. Formerly rupees of various kinds were coined; but the currency of the three presidencies was assimilated in 1835, and the only one now minted is the "*Company's rupee*," containing 180 troy grains of silver, 91⅔ per cent. fine (termed 91·66 touch), or 165 grains of pure silver, and worth intrinsically 1s. 10½d., though commonly estimated at 2s. The other silver coins are double, half, and quarter rupees. Smaller payments are made in copper pice, or in little shells called cowries. [COWRIES.]

The Company's rupee is declared to be in "value equal to the Madras, Bombay, Furruckabad, and Surat rupee, and to 15-16ths of the Calcutta sicca rupee." This last coin (weight 191·916 grains silver, 91·66 touch, or pure 175·921 grains) is intrinsically worth 1s. 11¾d. Formerly prices in Calcutta were sometimes reckoned according to an ideal standard, called the current rupee, 116 of which = 100 S. R.; the difference per cent. being termed *batta*. The principal gold coin is the new mohur of the same weight and fineness as the Company's rupee, and worth 29s. 2½d.; it is a legal tender for 15 R.: the Calcutta mohur, of 204·71 grains, 91·66 touch, worth £1, 13s. 2½d., is a tender for 16 S. R. Gold, however, being undervalued at these rates, is not demandable in payment, and is rarely in circulation. Silver is, therefore, the general medium of exchange and standard of value.

A *lac* is 100,000 rupees, or about £10,000; a *crore* is 10 millions of rupees, or £1,000,000; a *mas* is 100 crores.

In Indian notation, large sums are divided into periods of two figures only, except the last three: Hence a sum containing nine figures is pointed thus, 56,84,93,327, and read fifty-six crores, eighty-four lacs, ninety-three thousand, three hundred, and twenty-seven.

Exchanges.—Bills on London are commonly drawn at Calcutta, Bombay, and Madras, at 6 months' sight, or 10 months' date; the usual fluctuations being from 1s. 11d. to 2s. 1½d. per Company's rupee: the average rate (excluding interest) at which the Company have of late years realized their remittances is 2s. per rupee. Bills between the different presidencies are usually drawn at 30 days' sight.

BANKS, &c.

The banking business, in the hands of British subjects, has presented some peculiar forms, and undergone considerable vicissitudes. In Calcutta, it centred long in six great houses, with which the members of the public service lodged almost all their savings, and, receiving interest at 10 per cent., were in no haste to transfer their money to Britain. Deposits were thus accumulated to the amount of many millions, for which advantageous investment was found in advances to indigo planters, shipowners, and others; also by acting as agents, and carrying on mercantile speculations of their own. By these means great wealth was accumulated; but after 1814, when the trade was thrown open to the public, the bankers, unable to invest their deposits with the same advantage as formerly, disposed of them in loans to improvident individuals, or in the purchase of houses, mills, ships, and other subjects, which could not be made available when a demand for money arose. Yet no alarm was taken until the failure of Palmer and Co. in 1830; and even then confidence was not wholly withdrawn from the other houses, who continued to struggle on several years, meeting the demands gradually made for the deposits lodged with them by raising money in every mode, selling at ruinous loss, and mortgaging all descriptions of property, till, at length, when they actually fell, there remained for the general creditor scarcely enough to pay 5s. a-pound. The entire defalcations have been stated at £20,000,000, and the loss to the public at £15,000,000; but a writer in the Calcutta Monthly Journal for February 1838, seemingly on precise data, gives the following statement:—

Palmer & Co.	£2,600,000
Alexander & Co.	3,440,000
Macintosh & Co.	2,470,000
Ferguson & Co.	3.260,000
Colvin & Co.	1,210,000
Cruttenden & Co.	1,350,000
	£14,330,000

Of this sum only a fourth, according to supposition, being paid to the creditors, there remained upwards of £10,000,000 of loss.

The accommodation now derived from banking is limited, though increasing. The Bank of Bengal, founded in 1809, a fifth part of whose stock is held by the Company, now possesses a capital of £1,000,000. It has a local charter, and issues notes, which are taken in revenue payments. The Union Bank of Calcutta, formed chiefly by partners of the lapsed private firms, has now a capital of £800,000. Both, it is said, intend to form branches in the interior. At Agra there is one of £200,000, chiefly established by the servants of the Company. The Bank of Madras is a small government establishment for the convenience of the local authorities; it is now being enlarged. At Bombay a bank was lately founded, nearly on the same footing as the Bank of Bengal. The shares of all these banks are now at high premiums; and another called the Bank of Asia has been recently (1841) projected, with a capital of £1,000,000, and having the general management vested in a Court of Directors in London, after the manner of the British North American and other colonial banks. A joint stock bank at Madras is also projected.

The following were the rates charged by the Bank of Bengal in September 1841:—Discount on private bills, 3 months, 8 per cent. Discount on government and salary bills, 6 per cent. Interest on loans on government paper, 6¼ per cent.

Among the natives, paper-money does not exist; and yet banking in certain branches is an extensive occupation. One of its functions is to transmit money by bills of exchange, called *hoondees*, mostly of small amount, which are very well managed by the native bankers, or *shroffs*. All small payments, as already noticed, are made in copper, or in cowrie shells of above 5000 to the rupee, the furnishing of which occupies a numerous class of money-changers. They sometimes carry shells to the value of £15, which form a load for an ox, to market in the morning, change them for rupees, and at the end of the day receive the cowries in return. They levy on the transaction 1-36th, which it is supposed may yield them in the year 300 per cent.; but this is in a great measure a recompense for their labour.

The main source of profit, however, among the native bankers, arises from making advances, which, through poverty and improvidence, are required by a large body of the people. In transactions with persons in good credit, the ordinary rate of interest is 9 per cent.; but a much higher charge is made on loans to the agricultural population. Almost every native cultivator, or *ryot*, at the beginning of the season, receives on credit seed-corn and subsistence till the next harvest, the produce of which goes into the hands of the money-lender. He has usually indeed an account-current against him, which is never fully cleared off; and the interest is charged at the ruinous rate of at least 40 per cent. The zemindars are also obliged to have recourse to them, paying from 24 to 30 per cent. These usurious exactions are accompanied, and indeed occasioned, by the risk of losing the principal; but when this is avoided, and a large business carried on, enormous fortunes are accumulated. Several native bankers in Calcutta, Benares, and other large cities, are supposed to be worth nearly a million sterling.

DUTIES.

Bengal Presidency.—The general rate of import duty on goods brought in British vessels is 3½ per cent. *ad valorem*, but in foreign vessels, 7 per cent.; on marine stores and metals of British or colonial produce or manufacture, in British vessels, 3 per cent.; on woollens, do. do. 2 per cent.; coffee in British vessels, 7½ per cent.; tea, wines, liqueurs, and spices, do. 10 per cent.; spirits do. 9 annas per Imp. gallon; bullion, precious stones, grain, horses, ice, coal, and English books are free.

The duties are levied on the market value without deduction; and the whole are returned, saving ¼th, if the goods (excepting opium and salt), are re-exported within two years of landing: if the goods (saving opium and salt) are re-exported in the same ship, without being landed, no duty is exigible.

The general rate of export duty on country articles not enumerated, sent by British vessels, is 3 per cent., by foreign vessels, 6 per cent.; grain in British vessels, ½ anna per maund; indigo, do. 3 rupees per maund; on lac-dye and shellac, do. 4 per cent.; raw silk filature, do. 3½ annas per seer; Bengal wound silk, do. 3 annas per seer; tobacco, do. 4 annas per maund; double rates being exacted when exported in foreign vessels. Bullion, precious stones, living animals, and opium purchased at government sales, are free; also cotton-wool, if exported to Europe or America; and sugar and rum, if exported to United Kingdom or colonies.—(*Act of Governor in Council*, May 30, 1836.)

Bombay Presidency.—The import duties on the articles mentioned above are the same as at Calcutta.

The general rate of export duty is also, as at Calcutta, 3 per cent. on country articles sent in British vessels, and 6 per cent. when in foreign vessels; on tobacco, 1½ rupee per maund of 80 tolas to the seer; cotton-wool exported to Europe or America in British vessels, bullion, precious stones, books, living animals, and opium covered by a pass, free; opium not covered by a pass, prohibited.—(*Act of Council*, January 3, 1838.)

INDIA (DANISH) is limited to the two petty settlements of Serampore in Bengal, and Tranquebar on the Coromandel coast.

Serampore is situated on the Hoogley, 12 miles N. of Calcutta; pop. 13,000. It has little or no trade, but is celebrated as a missionary station, especially of the Baptists.

Tranquebar, a seaport and small territory on the Coromandel coast, is situate at one of the mouths of the Cavery, in lat. 11° 1′ N. long. 79° 55′ E., about 145 miles S. from Madras. It was purchased from the Rajah of Tanjore in 1616; pop. 20,000. Accounts are kept in rupees; and the maund weighs 68 lbs. Danish, or 74¾ lbs. avoird.

The trade with these settlements was formerly in the hands of the Danish East India Company,—an exclusive body which was dissolved in 1838. In their hands it was very inconsiderable, but will now probably be increased.

INDIA (DUTCH). [Java. Eastern Islands.]

INDIA (FRENCH), according to Malte-Brun, comprehends Pondicherry and Carical, with their dependencies on the Coromandel coast; Yandon and its dependencies, with the factory of Masulipatam in the Northern Circars; Chandernagore and its territory, with Gorette and some other factories in Bengal; and Mahé, and factories at Calicut and Surat on the western coast. These are almost all inconsiderable and declining places. The principal is Pondicherry, the chief seat of government.

Pondicherry is situated in lat. 11° 57′ N., long. 79° 54′ E., 85 miles S.W. of Madras; pop. 40,000. The town is handsome, and, though destitute of a harbour, possesses a tolerable roadstead. Trade, however, is dull,—the British fiscal regulations being adverse to intercourse with the interior. Exports, rice, drugs, sugar, indigo, and blue linens. The money of account is the pagoda = 3 rupees = 24 fanams = 5s. 10d. nearly. Grain is sold by the garse of 600 mercals = 104·70 imp. bushels. The maund = 8 vis = 25 lbs. 14 oz. 7 drams avoird.; and 20 maunds = 1 candy = 518·05 lbs. avoird.

These places have been generally captured by the British during war, and restored on the return of peace. All fortifications are destroyed; and the French are debarred by treaty from rebuilding them, or of maintaining any force beyond what is necessary for the purposes of police.

INDIA (PORTUGUESE) comprehends Damaun, Diu in Guzerat, and Goa; the last having a territory 40 miles in length by 20 in breadth, being the only place of consideration.

Goa, in lat. 15° 28′ N., long. 73° 51′ E., is situated on an island of the same name, at the mouth of the Mandona, 250 miles S. S. E. of Bombay. It was made by Albuquerque (by whom it was captured in 1510) the capital of the Portuguese possessions in the East; but it is now nearly superseded by New Goa, or Panjim, situated 5 miles distant on the seashore, and possessing one of the best harbours of India; pop. 20,000. This port, though formerly the centre of eastern commerce, has now only an inconsiderable trade with the mother country and the Portuguese settlements in China and Africa. Imports, chiefly piece goods, raw silk, ivory, sugar, woollens, glass, and some other European articles. Exports, hemp, betel-nut, cowries and toys, beads, &c. for Africa.

Accounts in Goa are kept in pardos, each divided into 4 good or 5 bad tangas, also into 240 good or 300 bad reas; the pardo is equal 2s. 5d. nearly. The candy of 20 maunds = 495 lbs. avoird., estimated in grain at 14 Winchester bushels. The other measures are Portuguese.

INDIA RUBBER. [Caoutchouc.]

INDIGO (Du. Fr. & Ger. *Indigo.* It. *Indaco.* Rus. *Krutick, Indigo.* Sp. *Anil*), a fine blue dye extracted from various species of *Indigofera*, principally the *I. tinctoria*, a knotty shrubby plant commonly propagated annually by seed. The indigo plant has been called "the child of the sun;" and a soil of the first degree of fertility, as well as a hot climate, are required to raise it in perfection. The grounds formed by the alluvial deposits of the tropical rivers have been found by experience the best adapted for the purpose. The dye is extracted from the plant by suffering it to ferment with water; during which it undergoes chemical changes that ultimately cause its deposition in the form of a blue feculent substance, which is collected and dried. Indigo, as met with in commerce, is in square cakes, or cubical masses of a deep blue colour. However carefully prepared, it always contains a considerable amount of impurities, the relative quantity of these being ascertained by its specific gravity, which is light in proportion to its purity. Mr Brande estimates the general amount of colouring matter at only 50 per cent (*Chemistry*, p. 943). In choosing indigo, the large regular-formed cakes should be preferred, of a fine rich colour, externally free from white mould, and of a clean net shape; when broken, the fracture should be of a bright purple tint, of a compact texture, free from white specks or sand, and when rubbed should have a shining copper-like appearance: it should swim in water, and when burnt by the candle it should fly like dust. This commodity is distinguished according to its different shades of colour. The principal shades are blue, which is the best, violet, and copper colour; and these are again subdivided into fine, good, and middling.

The indigo crop is subject to very great vicissitudes, both of quantity and quality; this leads to corresponding fluctuations of price; and it has been observed that of all the productions that have been made objects of commercial speculation, scarcely any has been a more fertile source of bankruptcies.

The chief localities of the indigo plant at present are Bengal and Guatimala, though of late years the exportation from the latter has been materially checked by the disturbed state of Central America. In the early period of our occupation of India, indigo formed a leading branch of the Company's trade; but the rude manufacture of the native population was, in course of time, expelled from the markets of Europe by the more skilfully prepared drug of America and the West Indies. Soon after the peace of 1783, the West Indian process of manufacture was introduced into Bengal, and the directors having relaxed their prohibitory system so far as to permit the application of British capital and skill to the cultivation of the plant on the alluvial depositions of the Ganges, the exportations were gradually increased, and the American and West Indian article almost entirely driven from the market. The manufacture was also introduced into Oude and the other north-western districts of the great Gangetic plain; and in later periods into some of the Madras provinces,—into Java, and into the Philippine Islands. The indigo produced every where else is, however, very secondary both in quantity and quality to that of Bengal and Bahar, the soil and climate of which seem to be peculiarly congenial to the plant. The average annual supply and consumption of indigo at present may be estimated as follows:—Supply: Bengal provinces, 34,500 chests, equal nearly 120,000 maunds, or 9,000,000 lbs.; other countries, including Madras and Guatimala, 8500 chests; total, 43,000 chests. Of this there is consumed in the United Kingdom 11,500 chests, or about 3,000,000 lbs.; France, 8000 chests; Germany and rest of Europe, 13,500 do.; Persia, 3500 do.; India, 2500 do.; United States, 2000 do.; other countries, 2000 do.; total, 43,000 chests, or upwards of 11,000,000 lbs. The consumption of late years has not increased in a ratio corresponding to the expansion of manufactures,—a circumstance which seems to be attributable partly to the less common use of blue cloth, and partly, perhaps, to the introduction of cheap substitutes suggested by the advanced state of chemical knowledge.

The quantity imported into the United Kingdom was, in 1820, 5,089,292 lbs.: in 1825, 6,793,631 lbs.; in 1830, 8,216,440 lbs.; in 1835, 4,168,395 lbs. In 1840, the imports amounted to 5,831,269 lbs., and the quantity entered for home consumption, 3,011,990 lbs. Upwards of 4-5ths of the imports are from the East Indies; the remainder chiefly from the West Indies, Guatimala, Peru, and the Philippine Islands. The surplus imported beyond the quantity consumed is re-exported to Germany, Russia, Italy, Holland, and other parts of the continent of Europe. France and the United States derive their main supplies by direct importation from Calcutta.

The following shows the prices in bond of the different kinds of indigo in the London market according to Prince's Price Current of September 17, 1841.

Gustimala & Caraccas	s.	d.		s.	d.
Floras..................lb.	6	9	to	7	0
Sabres....................	5	3	..	6	6
Cortes....................	2	9	..	5	4
Bengal fine blue............	7	9	..	8	3
Fine purple and violet	8	3	..	9	0
Good do....................	7	9	..	8	3
Middling....................	7	3	..	7	6
Copper fine..................	7	6	..	7	9
Good and middling..........	5	10	..	7	3

	s.	d.		s.	d.
Bengal ordin. violet and copper lb.	5	6	to	5	9
Oude good and fine..............	4	6	..	5	6
Low and middling............	1	9	..	4	3
Madras good and fine violet and blue..........................	5	3	..	6	3
Ordinary & middling do.......	1	10	..	5	0
Java.............................none.					
Manilla good & fine..............none.					
Ordinary and middling........	1	9	..	4	9

The American indigo is generally enclosed in sacks of coarse linen sewed into an ox hide, a kind of package which is called a *seron*, and contains usually about 250 lbs. The East Indian is in chests of about 3½ factory maunds, or 260 lbs.

INDORSATION: INDORSER. Indorsation is the assigning of a negotiable document, such as a bill of exchange or promissory note, by a writing on the back. The person who assigns is called the Indorser, the person in whose favour the assignation is made, the indorsee. Indorsement, in its full and common acceptation, conveys to the indorsee all the rights previously existing in the indorser, with the addition of a claim against the indorser himself. To enable this to be accomplished, however, with an English or Irish bill, there must be words intimating an intention on the part of the acceptor to pay to any bearer, or to any person holding right through the original payee, such as, "or order," "or bearer," otherwise the bill is a mere chose in action [Chose in Action], and the indorsement does not convey a right against the maker, but merely a claim on the indorser. It is held, however, that negotiable words omitted by mistake may be supplied (*Chitty*, p. 219). In Scotland, every bill or note is negotiable, unless it bear a special restriction. A bill payable simply "to bearer" is transferable without indorsement; but the person who delivers it does not by such act become a party. By 17 Geo. III. c. 30, bills and notes for sums of 20s. and upwards, but under £5, can, in England, only be indorsed before the time of payment, and must bear date at, and not before, the time of making thereof, and must be attested by a subscribing witness.

There is no form of words necessary for an indorsement,—the mere signature of the payee, called a blank indorsement, is a sufficient transference to the bearer. An indorsement with the name of the indorsee, and instructions to pay to him, is an indorsement in full. If a bill is once indorsed blank, it is assignable by delivery, notwithstanding posterior indorsements in full, unless they be restrictive. A restrictive indorsement may restrain the negotiability of a bill. "Pay to A B only," or "Pay to A B for my use," are forms of restrictive indorsements. Others may be conditionally restrictive, so as to prohibit negotiability until the condition is purified, as "Pay the contents to A B on my being gazetted ensign, before the day of ." An indorsement is not restrictive from having a consideration on the face of it. An indorsement may be qualified so as to bar the responsibility of the indorser, and merely transfer to the indorsee the claim against the previous parties. The usual form of accomplishing this is by appending to the signature the words *sans recours*. A bill cannot be indorsed for part of its contents after acceptance; but if partly paid, it may be indorsed as to the residue. A person who has delivered a bill without indorsement, when it was the understanding of parties that it should be indorsed, may be compelled in equity to do so; and if he die in the mean time, his executor or administrator may indorse.

An indorsee of a bill, who has given value for it, is not liable to objections which may be pleaded against a previous holder, unless aware of them when he took the bill. In England, however, a person who takes a bill protested for non-acceptance or overdue, does so with all the objections pleadable against the indorser. In Scotland, it appears to be held that the circumstance of a bill being overdue does not of itself affect the right of the indorsee, and is only a circumstance attended with more or less suspicion. A bill paid by the party originally liable ceases to be negotiable; but not so a bill paid by an indorser. Where the illegality of the original transaction makes a bill or note void, an indorsee, however onerous, cannot recover from the original drawee, but the indorser is liable to him, both on the bill and for the original debt. An indorser on whom recourse is intended to be had, must receive notice of non-acceptance or non-payment; and though, as between the drawer and drawee, notice may be rendered unnecessary from want of value, this will not affect the indorser's right to notice. (*Bailey on B.*, 120-170. *Chitty on B.*, 218-297. *Thomson on B.*, 250-308.)

INGOT, a mass of metal.

INK (Fr. *Encre*. Ger. *Dinte*) is composed of different ingredients, according to the purposes to which it is to be applied. *Printing Ink* is a black paint, which, from its drying nature, adheres readily to moist paper. It is chiefly composed of nut or linseed oil, which is ignited when in a boiling state, and suffered to burn until it has acquired the necessary drying quality; after which it is mixed with lamp-black when black ink is required, and vermilion when it is wanted of a red colour. *Writing Ink* is either black, red, or blue. The best black is made by boiling Aleppo galls in water, and then adding sulphate of iron,—the precipitate from these being kept suspended by gum-arabic: the proportions in general use are 2 of galls to 1 of sulphate of iron and 1 of gum-arabic; that of water is commonly 1 gallon to 1 lb. of galls. Logwood is sometimes used instead of galls for a cheap ink, but it does not yield a permanent colour. Red ink is made by boiling brazil-wood in weak vinegar, and adding alum. Blue ink is manufactured from the ferro-prussiate of potash and oxide of iron. *India*, or *China Ink*, employed in drawing, consists of fine lamp-black mixed with gum-water or fine size. The writing inks anciently in use appear to have been all of this kind. *Marking Ink*, for linen, is generally a solution of nitrate of silver, which is written upon the fabric after it has been impregnated with an alkaline solution, as carbonate of soda. The inks in which lamp-black is the colouring matter will be always the most durable; but the common ink possesses the advantage of flowing easily from the pen. The manufacture of printing ink is chiefly confined to London; that of writing ink is more widely distributed. All kinds are exported, but the whole amount is inconsiderable.

INKLE, a kind of broad linen tape made at Manchester.

INNS AND INNKEEPERS. The only department under this head, coming within the limits of the present work, is the law in relation to the liability of innkeepers for the property of travellers coming under their roof. An innkeeper, by adopting his trade, comes under a contract of insurance with each guest he receives, becoming liable to indemnify him for property lost, without reference to the manner in which the loss has been occasioned,—provided it have not originated in the guest's own carelessness or misconduct. If loss be occasioned by the guest's own companion or servant introduced by him to the inn, the loss is his own. The responsibility is placed on the same principle as that of carriers, and is in almost all respects the same, with the difference that it has not been yet limited by statute. [CARRIERS.] How far the innkeeper can limit his responsibility by warning given to the guest, is a doubtful point. It is held that the law being fixed, the guest entering an inn under the assurance of its protection, cannot be deprived of it against his will by any warning or intimation which the landlord may choose to give (*Dalton's Justice*, 133): but if the guest acquiesce by taking the goods under his own special charge, the responsibility is removed (Burgess *v.* Clements, 4 *M. & Sel.* 310). There is considerable nicety as to the extent to which the guest is bound to see his property put in the right place, or deposited with the right person. He who leaves valuable goods in a courtyard or passage, without drawing attention to them, will have no recourse: on the other hand, where it was the rule of the house to deposit the guests' goods in their bedrooms, and a traveller directed his luggage to be taken to the commercial room, where it was stolen, the landlord was found responsible. It appears that he would not have been so, however, had he expressly declined to take charge of the goods unless they were deposited in the bedroom.—(Richmond *v.* Smith, 2 *Mann. & Ryl.* 235.)

It is a farther obligation on an innkeeper, that he must receive every guest who offers himself, until his establishment is filled. He is not bound, however, to give credit, and before submitting to this his obligation to the public, he may require reasonable remuneration to be first tendered.—(*Chitty's Burn's Justice. Alehouse*, xvi. *Sir E. L. Tomlin's L. Dictionary*, voce *Inns.*)

INSOLVENCY, in its most simple and extensive meaning, denotes a man's inability to meet his debts. It is applied only to a person who is not under the operation of the bankrupt statutes, whether from his not belonging to the class of trading persons to whom the acts apply, or from that method of disposing of the estate not having been adopted by the creditors. Every bankrupt must necessarily, however, be an insolvent. In Scotland, the former expression is applied to all persons, whether tradesmen or not, who have shown certain public symptoms of inability to pay the debts demanded of them; and these indications, to constitute this species of bankruptcy, must always be accompanied by insolvency. In England and Ireland, the term insolvent is now technically used with reference to such persons as are taking advantage of, or subjected to the operation of the insolvency acts, which provide a sort of bankruptcy system for those debtors who do not come within the operation of the traders' bankruptcy statutes. In Scotland, the name by which the equivalent process is known is *cessio bonorum*; and the term insolvent is not there technically applied to a debtor undergoing this process. [CESSIO.]

There have been three separate means of relief open to imprisoned debtors in England, viz. the lords' act, the small debtors' act, and the general insolvent debtors' act. The first of these, which was partly suspended by the earlier insolvent acts, and partly in disuse, is entirely abrogated by the last insolvent act (1 & 2 Vict. c. 110, § 119). The small debtors' act, 48 Geo. III. c. 123, provided for the release of those who have been 12 months in prison, on debts not exceeding £20; but by the latest insolvent act this also has been virtually superseded.

A separate court for the relief of insolvent debtors was first constituted by Lord Redesdale's act, 53 Geo. III. c. 102, and was continued by four acts of the reign of George IV., the last of which, 7 Geo. IV. c. 57, was the existing statute down to the passing of Sir John Campbell's act, commonly called the Act for abolishing Arrests in Mesne Process (1 & 2 Vict. c. 110), by which the insolvency system was improved. The court consists of a chief and three ordinary commissioners, and is a court of record, with full powers for enforcing its jurisdiction. An individual commissioner may hold a plenary court; and there are arrangements in the act for enabling the commissioners to hold circuit courts. The act has two objects in view: in the first place, the protection of debtors from oppressive imprisonment; in the second, the affording a summary process to creditors for distributing the available property of a debtor. When a debtor applies for the benefit of the act, he must be within the walls of a prison. The act may be taken advantage of by the creditors of an insolvent, on his remaining 21 days in prison without satisfying the debt for which he was imprisoned. In either case, the operation of the act is applied for by summary petition to the court. The result is, an order vesting in the provisional assignee the whole property of the insolvent, real and personal, existing or contingent, with the exception of apparel, bedding, and other necessaries, and workmen's tools, not exceeding, on the whole, £20 in value. There are specific provisions for the vesting and disposal of the several kinds of property, and exceptional provisions for adjustment in the case of public officers, clergymen, and others. The creditors have a partial control in the disposal of property. There are arrangements for the examination of the insolvent, and for making the necessary investigations into the amount of his property, the circumstances out of which his involvements have arisen, and such like. After the examinations are over, the debtor is to be discharged, either forthwith, or at such a time that his imprisonment shall not, on the whole, exceed six months, computed from the order vesting the estate in the assignee, unless there be special reason for punishing him by a longer imprisonment. In certain cases of fraud connected with the proceedings on the petition, the court may adjudge the confinement to continue for such a period as shall not make it on the whole exceed three years (§ 77). In certain cases enumerated in the act, where the circumstances connected with the insolvent's embarrassments show fraud or gross recklessness, the imprisonment may, in like manner, be continued for *two* years. The result of a discharge is, that the debtor is relieved from execution and imprisonment for the debts to which the discharge applies.

IN IRELAND, the system for the relief of insolvent debtors was adjusted on the model of the English act by 3 & 4 Vict. c. 107. The amount to which the debtor's wearing apparel, bedding and tools, are there privileged, is £15.

INSURANCE, in its legal definition, is a contract of indemnity, one party engaging to make good to another the pecuniary loss that may be, or may be presumed to be occasioned by any future or contingent event, in consideration of a sum certain received or promised. The most obvious subjects of insurance are those which can be measured by a pecuniary value, and to this fair estimate of loss, insurances by individuals on their own lives is the only exception; a case in which no mischief can arise from the insured valuing his life at the sum for which he can pay the premium of insurance. In this contract, the person who insures is called the Insurer, and technically the Underwriter, from his writing his name (in marine insurances) under the sum he will stand good for. The party obtaining the insurance is called the Insured, or the Assured, and the deed by which the insurer becomes bound is called a Policy of Insurance.

The principle of insurance is that of equalizing the accidents of life or fortune, by many joining together and consenting that all shall bear the average lot of the whole; or, what is the same, of reducing to each individual, in every case, his possibility of loss down to the average loss of a great number of individuals or cases. "Though based upon self-interest," says Professor De Morgan, "yet it is the most enlightened and benevolent form which the projects of self-interest ever took. It is, in fact, in a limited sense, and a practicable method, the agreement of a community to consider the goods of its individual members as common. It is an agreement that those whose fortune it shall be to have more than average success, shall resign the overplus in favour of those who have less. And though as yet it has only been applied to the reparation of the evils arising from storm, fire, premature death, disease, and old age, yet there is no placing a limit to the extensions which its application might receive, if the public were fully aware of its principles, and of the safety with which they may be put in practice."—(*Essay on Probabilities*. Preface, p. xv.)

In this part of the work we shall consider the three great divisions of the contract, namely, Fire, Life, and Marine Insurance; but a variety of other information, directly or collaterally bearing upon the subject, will be found under the heads ANNUITY, FRIENDLY SOCIETY, INTEREST AND ANNUITIES, and REVERSIONS.

INSURANCE (FIRE) is a contract for indemnity against losses by fire within a limited period. In this country such insurances are made by joint-stock societies, of which two kinds are distinguished: proprietary companies, who insure at their own risk and for their own profit; and mutual or contribution societies, the parties insured with which are members or partners, and participate in the profit or loss. A particular account of the conditions on which insurances are granted may be readily obtained from any of the offices, or their agencies, several of which are to be found in every town throughout the kingdom. These conditions are always printed in the policy; and this document usually provides that the office shall pay the loss and damage suffered by the assured, not exceeding the sum fixed, "according to the tenor of the printed conditions hereunto annexed."

Merchants sometimes keep open a floating policy on "goods their own, in trust, or on commission," by which means all the merchandise in their possession, whereever deposited (within the district over which the insurance is made to extend), is covered either wholly or in part, according as the aggregate value of such merchandise shall happen to be under or above the sum insured. A loss under such a policy is settled on the average principle. Thus, if an insurance of £10,000 is effected without specification, and a loss of £2000 incurred, the merchant would be required to show the total value of the goods held by him. Supposing it to be £20,000, double the amount insured, he would in such case be entitled to recover only £1000, as he must bear his own risk on the £10,000 uninsured.

The "conditions" usually provide that persons insuring at the office must give notice of any other insurance made elsewhere on their behalf on the same subject, and cause such other insurance to be indorsed on their policies. This clause is introduced to protect the offices against the fraud of persons attempting to recover more than the loss sustained by them.

No precise account was ever published of the proportion of insured houses upon which claims have arisen. The premiums, therefore, are not computed as in life insurance, from exact data, but, as in marine insurance, simply from a loose general estimate of the risk. The risks are usually divided by British offices into four classes, termed Common, Hazardous, Doubly Hazardous, and Special or Extraordinary. For the first, the annual premium is 1s. 6d. per cent.; for the second, 2s. 6d.; for the third, 4s. 6d.; for the special risks the premium varies of course according to the particular circumstances of each case. But a duty is besides payable to government of 1s. for each policy, and of 3s. per cent. per annum on the sum insured, except in the case of farm-produce, stock, and implements, which are entirely exempted from duty. This advantage to the agricultural interest over other classes of the community was granted by the act 3 and 4 W. IV. c. 23.

Fire insurance is of modern origin, having been little known before the Revolution. Since then the practice has become general throughout this kingdom, and has, besides, been partially introduced into many foreign countries. The number of British offices is at present about sixty. In the year 1840, the amount of duty levied by several of the principal companies, and accounted for by them to government, was as follows:—Sun, £162,109; Phœnix, £133,339; Royal Exchange, £70,154; Norwich Union, £67,665; County, £45,481; West of England, £33,746; Guardian, £33,251; Globe, £32,246; Imperial, £31,263; Alliance, £26,310; Atlas, £25,688; Manchester, £20,881; Scottish Union, £20,553; Union, £19,355; Westminster, £18,659; British, £18,478: And by the other offices, £231,608: Total, £990,786,* which, as the duty is 3s. per cent., shows the value of the property insured to have been £660,524,000. Adding to this, £54,715,016, the amount on farming-stock, makes the total amount insured in 1840, £715,239,016, a sum which, immense though it be, might be greatly increased, but for the oppressive duty, which on common risks amounts to no less than 200 per cent. on the premium.—(*Par. Papers*, 1841: Nos. 173 & 326.)

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* This was the gross sum; an allowance of 4 or 5 per cent., according to circumstances, is paid to the offices for collecting the duty, which reduces the net revenue drawn by the government from fire insurances in the above year to £944,321.

Law of Insurance against Fire.

This contract is ruled by the same principles which affect marine insurance [see below], so far as these are applicable to the nature of the contract. There have been fewer litigated cases illustrative of the law in this department, but the authorities refer to the cases in marine insurance as precedents. The policy is always an open, not a valued one, there being no abandonment. The contract is generally renewable from year to year, on payment of the premium in advance; and it is usual to stipulate that the policy shall not lapse until after some definite number of days beyond the expiry of the year. By 14 Geo. III. c. 48, the insured must have an interest in the subject, as proprietor, creditor, agent, or trustee: and it is said that a depositary or holder in pledge might show a sufficient interest, subject to the rules established by the office, which have the effect of stipulations between the parties. No more can be recovered than to the extent of the interest, and so when the same subject is insured at more than one office, each pays rateably. The risk insured against is fire, or ignition. To enable the insured to recover, something must have been actually on fire which ought not to have been on fire; and so the effects of heat radiating from fire in its proper place are not included. The business of sugar-refining was pursued in a building of several stories, to each of which heat was communicated by a chimney passing through the whole building, and at the top of the chimney there was a regulator, kept closed at night to retain the heat, but which ought to be open while the fire was burning. On one occasion it was shut at an improper time, and the building was filled with smoke and sparks which occasioned damage. It was found that the insured had no claim on the policy, though it warranted them "against all the damage which they should suffer by fire" (Austin *v.* Drewe, 6 *Taunt.* 436). If there be ignition, however, though not of the subject insured, the injury occasioned by the event is within the policy, though more immediately caused by the efforts to protect the subject from the fire, as by the removal of furniture. In Scotland, where a neighbouring house had been consumed, a gable of which was left standing unsupported, and in the attempt to take it down, it fell against the insured premises, and destroyed manufactures contained in them, this was held a loss within the policy. (Johnston *v.* West of Scotland Ins. Co. 1828, 7 *S. & D.* 52.)

The extent of the insurance must often be interpreted from the general scope of the definition. Where "stock in trade, household furniture, *linen*, wearing apparel, and plate" were insured, the word "linen" from the context was held to include only household linen, and not linen drapery goods purchased on speculation (Watchorn *v.* Lanford, 3 *Camp.* 422). Warranties must be strictly complied with as in marine insurance [Warranty]; and so when there is a scale of risks, and property is insured as of a lower class than that to which it belongs, the policy is void. Some risks generally termed "extraordinary" are not included in the tables of premiums, but must be the subject of special contract. A material misrepresentation will vitiate the contract as in marine insurance. Concealment of a circumstance materially affecting the risk will have the same effect, though it should happen to be the result of mistake and not of fraud; hence, where a fire had taken place in the close vicinity of the property insured, and the fire was apparently extinguished, and persons employed to watch the place, and in the mean time the insurance was negotiated, the circumstance was held one which ought to have been communicated; and the fire breaking out again two days afterwards and burning the premises mentioned in the policy, there was no recovery for the loss (Bufe *v.* Turner, 6 *Taunt.* 338). It is a usual condition that "no loss or damage by fire happening by any invasion, foreign enemy, or any military or usurped power whatsoever, will be made good." The term "usurped power" has been held not to apply to a mob, but only to embrace the case of rebellion, where there are armies and military operations, during which the civil laws are silenced. The expression "civil commotion," however, will except all acts of popular violence. There is generally indorsed on the policy the method of claiming for a loss, the period at which the claim may be made, and certain articles of evidence which the claimant must adduce. It is not unfrequently a condition that he must produce "a *certificate* under the hands of the minister and churchwardens [or in Scotland the elders], together with some other reputable inhabitants of the parish, not concerned in such loss, importing that they are well acquainted with the character and circumstances of the person insured, and do know or verily believe that he really and by misfortune, without any fraud or evil practice, has sustained by such fire the loss and damage; but till such affidavit and certificate of such insured's loss shall be made and produced, the loss-money shall not be payable" (*Ellis*, 61, 62). In England, such a clause has repeatedly been held as a condition precedent, and of the nature of a warranty which must be absolutely complied with before there can be a claim for loss,—the unreasonableness of the refusal to sign the certificate not affecting the question. In Scotland there seems to have been no case on the point. Professor Bell, however, is of opinion (*Comm.* I. 168) that, though "the want of those compurgators will raise an unfavourable presumption against the insured," yet "it does not seem to be law in Scotland that these are all absolute conditions precedent to the recovery of a loss by fire, so as to have the effect of enabling persons hostilely disposed towards the insured to extinguish his claim for loss."—(*Park on Insurance*, 653-670. *Marshall on Insurance*, 785-813. *Ellis on Fire and Life Insurance.*)

INSURANCE (LIFE) or ASSURANCE, a contract for payment of a certain sum, or of an annuity, in the event of the death of a particular person, in consideration of a *premium* paid at once, or periodically. Assurances are said to be *absolute* when the sum assured is payable on the death of the party assured; *contingent*, when the payment of this sum depends upon some other event, as the existence or antecedent death of some other person or persons. They may be also divided into *temporary* assurances, where the sum is payable only in the event of the expiry of the life *within* a certain limited time; *deferred* assurances, where it is payable in the event of the expiry of the life *after* a certain time; and assurances for the *whole life*, payable on the expiry of the life assured, at whatever time this may happen. Assurances are also effected on joint-lives, under various contingencies; but the greater number are those made on policies for the whole period of a single life, in consideration of an equal annual premium.

Utility of Life Assurance.—Life assurance may be made subservient to many purposes. Of these, the principal is enabling persons dependent on their own personal exertions, or whose income ceases at their death, to secure a provision for their surviving dependants; but it is also highly useful in various commercial and legal transactions. Among others, the following may be enumerated:—

Capital laid out in the purchase of annuities depending on a life will acquire permanence by assuring such life.

Securities on life interests may, by assurance, be rendered eligible for the purpose of raising loans.

Fines may be applied for the renewal of leases, determinable upon the demise of a party or parties. The guardians of a person who, at a certain age, will come into the possession of property, may obtain a security for advances made in the interim, by assuring his life until he shall arrive at the given age. Dependants on the lives of others may, by assuring such lives, be relieved from the anxiety natural to their situation.

A debtor who is unable to satisfy the demands of his creditors immediately, but who may have the means of liquidating the amount in a certain time, should he live so long, may, by the aid of a temporary assurance on his life, offer a satisfactory arrangement; or, should his views fail in discharging his debts in the given time, and he or his creditors continue the assurance, the amount will by that means be realized at his decease.

Persons having issued post obit bonds may realize their amount at the time they become payable, by assuring the life or lives on whose failure they become due.

Marriage settlements may be effected advantageously through the means of life assurance, particularly where the husband is engaged in trade. For example; if the lady's fortune be £2000, one-half may be placed at the gentleman's disposal, and the remaining half be invested in the funds, in the names of trustees, on behalf of the lady. The interest on this investment, employed in an assurance on the gentleman's life (his age being 25), will realize £2000, the whole amount of the lady's fortune, at his decease, which, with the principal money in the funds added, gives £3000, the lady's original fortune increased by one-half, and independent of whatever the husband may have made of the moiety he received.

It is, however, almost impossible to detail the various ramifications of the system, or to limit the extent to which it may be carried in a country such as Great Britain. It encourages all to the moral obligation of exercising forethought and prudence, since through its means these virtues may be successfully practised, and their ultimate reward secured. These are benefits which it confers upon the individual. But the system is likewise highly beneficial to society at large, inasmuch as while the annual premiums are considered as a part of expenditure, they and the accruing interest on them are in truth so much added to the productive capital of the community. It was therefore with much justice that Mr Morgan considered "every assurance made for the purpose of providing for a surviving family, in whatever office it is effected, not only as a private but as a public good."

Assurance Societies.—The assurers in this country are generally public companies or offices. The oldest of these is the Amicable, chartered in 1706; next, the Royal Exchange, and London Corporation, both in 1720; then the Equitable, in 1762. In 1792, the Westminster was founded; then the Pelican in 1797; and the Globe in 1799. Many other societies have been founded since the commencement of the present century, and their number is at present nearly ninety, which is exclusive of those whose operations are confined to particular professions or trades. The premiums required are adjusted according to the age of the party on whose life the assurance is made. They are lowest on young lives, and increase from year to year as the expectancy of life diminishes. The rates of many of the offices are calculated according to a table of the duration of life, founded on the Northampton bills of mortality; others, according to later tables formed from observations upon the population of Carlisle, and on the mortality found to exist among the government life annuitants. [INTEREST AND ANNUITIES.] The Northampton tables, principally used by the older offices, show a much higher (or more rapid) mortality than is now found to obtain, and very large profits have in consequence been realized by many establishments, particularly those, such as the Equitable, who have besides reckoned upon money being improvable at only 3 per cent. interest. The younger offices have commonly arranged their scales of premiums upon views more favourable to the continuance of life. Yet even in those cases considerable savings are generally realized, as the mortality prevailing among assured lives is commonly less than that indicated by any of the tables at present in use, owing to improvements in medical science, as well as in the habits of the people since these tables were constructed;* while, again, assurance offices have, by the purchase of reversions and otherwise, frequent opportunities of investing their funds at a much higher rate of interest than that at which their premiums are computed.

The annexed table shows in a classified form the annual premiums demanded by nearly all the British offices, and by two foreign offices, for an assurance of £100 on the whole life, after the ages 30, 40, and 50. It also exhibits the precise rates at these ages, according to different tables of mortality, reckoning interest at 3 per cent., or the annual premium which, accumulated at the said rate of interest, would exactly amount to £100 at the expiration of life, as shown by these tables.

1. The offices included in the first class are, *proprietary*, or joint stock companies, with a subscribed or paid-up capital, which assure to a person paying a fixed premium a fixed sum at his death, and divide their profits entirely among their shareholders. This system, therefore, is merely the sale of an insurance to those who are disposed to purchase, at such prices as shall leave a profit to the proprietors.

2. The second class consist of *mutual assurance societies*, which have no proprietary, but divide all their profits among the assured, after deducting the expenses of management, and reserving a guarantee fund. The mode of calculating profits, however, and the proportion reserved for a guarantee fund, appear to differ in all. Thus—the Amicable distributes profits equally, share for share, among the representatives of the deceased members, without reference to the time during which the assurance may have continued: the Equitable divides theirs only among the 5000 members who have been longest assured: the Norwich Union adds septennially the whole of the surplus premiums to the policies in proportion to the sums paid: the Scottish Widows' Fund adds two-thirds of their surplus premiums septennially to the policies, not only *retrospectively* in regard to the number of premiums paid, but also *prospectively* in regard to all policies that may emerge before the next stated period of investigation: and the Scottish Provident reserves the surplus entire for those members who survive the period at which their premiums, with accumulated interest, amount to the sums in their policies. These, as well as the other plans, will be found more fully explained in the prospectuses issued by the different offices.

3. The third class, called *mixed mutual and proprietary associations*, generally divide their profits in a certain proportion betwixt a body of proprietors and the parties assured at stated periods, commonly every five or seven years. The share of the assured is, by many of the offices of this class, as well as of class 2d, either added to the policy, or applied in reducing the annual premiums, in the option of the party. The proportions allowed to the assured by the different offices, in so far as the same have been made public, are as follow:—*Five per cent.*, Westminster; *Two-thirds*

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* The principle acted upon by offices of rejecting bad lives might also be supposed to preserve their rate of mortality above the average; but this is counterbalanced by the adverse interests which lead, notwithstanding every precaution, to policies being effected upon many such lives. Hence the utmost vigilance is necessary on the part of offices to keep insured lives up to the ordinary standard.

Table of the Annual Rates of Premium charged by each British Office at the Ages of 30, 40, and 50, for an Assurance of £100 upon a single Life.

Founded.		Age 30.			Age 40.			Age 50.		
		£	s.	d.	£	s.	d.	£	s.	d.
	1. *Proprietary Companies.*									
1840	Agricultural.....	2	4	3	2	19	11	4	5	0
1805	Albion..........	2	6	0	3	2	3	4	7	0
1833	Argus...........	1	19	10	2	13	9	3	19	3
1824	Asylum	2	2	0	2	17	1	4	2	0
1837	Britannia........	2	0	8	2	15	1	4	1	4
1840	Farmers	2	4	1	2	18	10	4	4	5
1803	Globe	2	13	5	3	7	11	4	10	8
1797	Pelican..........	2	8	3	3	3	7	4	7	3
1720	Royal Exchange..	2	13	3	3	8	0	4	10	9
1824	Yorkshire	2	5	0	2	19	9	4	1	9
1834	York & London..	2	3	0	2	17	3	4	0	7
	2. *Mutual Associations.**									
1706	Amicable.........	2	10	6	3	5	0	4	16	6
1837	Clergy	2	6	4	3	2	2	4	7	4
1762	Equitable.........	2	13	5	3	7	11	4	10	8
1836	Hand in Hand ...	2	13	5	3	7	11	4	10	8
1838	London & Westminster.........	2	9	6	3	6	3	4	12	0
1835	Metropolitan.....	2	9	9	3	6	4	4	12	0
1834	Mutual...........	2	10	2	3	7	6	4	12	7
1835	National Provident	2	10	2	3	6	3	4	11	1
1808	Norwich Union ..	2	8	10	3	2	0	4	6	0
1825	Scottish Amicable	2	11	1	3	5	6	4	8	3
1830	Scottish Equitable	2	11	1	3	5	6	4	8	4
1837	Scottish Provident	2	1	6	2	14	9	4	1	7
1815	Scottish Widows F.	2	11	1	3	5	6	4	8	4
	United Travellers	2	8	11	3	4	11	4	10	6
	3. *Mixed Mutual and Proprietary.*									
1826	Aberdeen.........	2	5	7	2	19	7	4	6	10
1839	Active...........	2	6	10	3	1	6	4	4	9
1838	Alfred	2	13	5	3	7	11	4	10	8
1824	Alliance..........	2	9	2	3	6	6	4	14	2
1808	Atlas............	2	13	5	3	7	11	4	10	8
1840	Australasian.....	2	0	7	2	15	3	4	1	8
1839	Benevolent.......	2	6	4	3	2	8	4	12	2
1838	British & Colonial	2	8	10	3	5	0	4	10	7
1820	Brit. Commercial	2	13	5	3	7	11	4	12	11
1838	British Empire ..	2	8	4	3	4	7	4	12	4
1833	Caledonian	2	9	10	3	4	2	4	7	0
1838	City of Glasgow..	2	9	9	3	4	6	4	8	3
1840	Church of England	2	6	10	3	3	6	4	13	4
1825	Clerical, Medical, &c............	2	10	4	3	3	8	4	7	3
1839	Commercial......	2	8	10	3	5	0	4	10	7
1824	Crown	2	10	4	3	4	7	4	8	11
1807	Eagle............	2	9	10	3	4	4	4	12	4
1823	Economic	2	4	3	2	19	9	4	8	0
1823	Edinburgh	2	7	7	3	3	2	4	9	0
1839	Edinburgh & Glasgow	2	6	10	3	1	3	4	9	1
	3. *Mixed continued.*									
1838	English and Scottish Law........	2	9	9	3	6	6	4	10	9
1840	Equitable (New)	2	8	1	3	3	5	4	8	9
1819	European........	2	9	3	3	4	3	4	8	6
1838	Family Endowm'.	2	9	7	3	5	9	4	10	6
1838	Freemasons......	2	7	5	3	2	10	4	9	3
1838	Glasgow	2	9	1	3	3	10	4	6	11
1821	Guardian	2	10	7	3	5	0	4	8	0
1807	Hope............	2	13	5	3	7	11	4	10	8
1820	Imperial	2	13	5	3	7	11	4	10	8
1823	Law Life.........	2	13	5	3	7	11	4	10	8
1836	Legal & General..	2	10	9	3	5	11	4	10	9
1836	Lic'. Victuallers..	2	5	8	3	1	3	4	9	6
1841	Life Assoc. of Scot.	2	8	7	3	5	1	4	13	3
1721	London Assurance	2	11	11	3	7	0	4	16	1
1806	London Life......	2	19	0	3	15	0	5	4	0
1840	London, Edinburgh, & Dublin	2	8	10	3	5	0	4	10	7
1824	Manchester......	2	10	7	3	5	0	4	8	0
1836	Minerva..........	2	10	7	3	5	0	4	8	0
1837	National Endowment...........	2	5	6	3	2	0	4	5	6
1830	National	2	9	5	3	7	5	4	18	7
1837	National Loan Fd.	2	9	3	3	5	3	4	13	6
1809	North British....	2	9	5	3	6	1	4	11	11
1836	North of Scotland	2	5	8	2	19	5	4	7	1
1797	Palladium........	2	13	5	3	7	11	4	10	8
1826	Promoter........	2	9	2	3	6	6	4	14	2
1835	Protector........	2	10	7	3	5	0	4	8	0
1839	Protestant Dissenters.............	2	11	1	3	7	0	4	15	0
1806	Provident	2	13	5	3	7	11	4	10	8
1806	Rock.............	2	13	5	3	7	11	4	10	8
1837	Royal Naval and Military	2	12	3	3	7	8	4	14	6
1824	Scottish Union ...	2	9	11	3	5	0	4	7	9
1825	Standard..........	2	10	7	3	4	11	4	8	6
1836	Standard of England	1	19	7	2	13	5	3	18	8
1810	Sun..............	2	9	2	3	6	6	4	14	2
1714	Union............	2	13	5	3	7	11	4	10	8
1835	United Kingdom	2	8	2	3	3	4	4	10	7
1834	Universal.........	2	8	10	3	3	0	4	5	6
1825	University........	2	10	9	3	4	7	4	7	6
1838	Victoria..........	2	9	2	3	6	6	4	11	10
1807	West of England	2	8	0	3	1	3	4	3	6
1792	Westminster	2	13	4	3	7	11	4	10	10
	Northampton 3 per cent............	2	13	5	3	7	11	4	10	8
	Carlisle 3 per cent.	1	19	1	2	12	0	3	12	5
	Equitable Experience do..........	1	18	6	2	10	9	3	11	0
	Gov. Males do....	2	2	7	2	15	7	4	1	0
	Gov. Females do..	1	17	5	2	8	5	3	7	3

of one-fifth, London Assurance and National ; *One-third*, Benevolent and Union ; *One-half*, Australasian, Guardian, Protestant Dissenters, Sun, and Victoria ; *Two-thirds*, Caledonian, City of Glasgow, Crown, Edinburgh and Glasgow, English and Scottish Law, Equitable (New), European, Hope, Imperial, Licensed Victuallers, Manchester, National Endowment, National Loan Fund, North British, Rock, Scottish Union, and United Kingdom; *Three-fourths*, Active, Economic, Promoter, Protector, and Universal; *Four-fifths*, Alfred, British and Colonial, Church of England, Eagle, Edinburgh, Family Endowment, Law Life, Legal and General, Minerva, Palladium, Royal Naval and Military, and University ; *Five-sixths*, Commercial ;

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* Some of these have adopted separate lower scales for temporary and non-participating assurances.

Nine-tenths, North of Scotland; *Seventeen-eighteenths*, Provident; *Whole from participation scale*, Aberdeen, British Empire, Freemasons, and London, Edinburgh, and Dublin, London Life, and Life Association of Scotland. But these proportions, it has to be observed, form a very uncertain view of the advantage to the assured, as the companies generally differ in their mode of estimating profits, expense of management, and in the benefits reserved for their shareholders. In this uncertainty, perhaps the safest guides are the statements which are published by some of the offices of the profits actually assigned to the parties assured.

Many of the offices in this class have lower scales, under which the assured remain independent of them, as in class first. In not a few also the rates of premium on the lives of females are rather less than on those of males.

The selection of an office is sometimes a matter of considerable difficulty; and can seldom indeed be fitly made by persons not conversant with life assurance business. The mutual assurance and proprietary systems have each their advocates. On behalf of the first, it is chiefly argued that the assured have the benefit of all the profit realized; while the proprietary companies state that their arrangement has the advantage of simplicity, that the realization of profit by the assured under the former system is uncertain, and that it entails upon them the responsibility of partners for the losses of the society.* Each kind, however, has its advantages, according to the objects of the party wishing to be assured. For family purposes, and especially where the party is young, the mutual associations are generally preferred; while for temporary or "short assurances," and those connected with many kinds of trust and money transactions, a liberal proprietary company is commonly chosen: the mixed associations hold out the advantages of both methods. A proprietary company making no returns will be selected on a joint consideration of its respectability, rate of premium, and of the conditions annexed to its policy. In the case of a mixed office sharing profits, regard will besides be paid to the amount of their returns or *bonus*. In a mutual society, the rate of premium is by some deemed of minor importance, as the surplus is divided wholly among the assured, and the office may in so far be regarded as his savings bank; but rates greatly in excess lead to a needless amplitude of funds,—a condition not very favourable to economical management.

In the division of the surplus premiums or bonuses, the methods followed by the offices seem to be fair, in so far as they make the chance of surplus the same for one member as for another, at least of those who enter at the same age: if there be any thing inequitable, it arises when the premiums, as is sometimes objected to those computed from the Northampton Table, are disproportioned at different ages, so that the surplus is differently levied upon different classes of members. But the high respectability of most or all of the offices using the Northampton Table has led to this alleged inequality being very generally disregarded.

Mode of Effecting Assurance.—The company delivers to the party proposing an assurance a printed form, which, where the assurance is on his own life, he fills up with his name and designation, the place and date of his birth, the sum to be assured, and the duration of the assurance, along with various particulars regarding his health, viz.: whether he has resided abroad, has had smallpox or cowpox, been affected with palsy, apoplexy, fits, convulsions, spitting of blood, consumption; or has been subject to gout, insanity, rupture, or to any other disease tending to shorten life. This is followed by a certificate or *declaration*, warranting the truth of these particulars, and declaring them to form the basis of the contract. Where the assurance is intended to be on another life than that of the proposer, the same particulars are furnished, and warranted, with a farther declaration that the proposer has an *interest* in the life of the other to the full amount to be assured thereon. In both cases, references are besides given to two friends of the party on whom the assurance is made. One of these must generally be the party's usual medical attendant, from whom a very minute declaration is sometimes required, not only on the above particulars regarding the party's health, but also as to his predisposition to disease, and his habits as to activity and temperance. When this is completed, the party whose life is to be assured generally makes his appearance before a committee of the directors of the company, or their medical officer, by whom farther inquiries are made; and the result is entered in the company's books accordingly. The declaration, certificates, and other papers, are then laid before the board; and from these documents, and frequently information derived from other sources, their decision is formed, and communicated to the applicant. On payment of the premium a receipt is given, containing the number of the policy, which is then made out agreeably to the declaration, inspected by the board, signed by a certain number of directors, and delivered to the party interested.

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* Every desirable security may be obtained on the mutual principle. The proprietary and mixed companies offer, it is true, the guaranty of a subscribed or paid up capital in addition to the premiums, but it has long been proved, that with proper tables and a fair amount of business at starting, this capital is unnecessary. The only advantage of capital to an office seems to lie in its enabling the directors justifiably to seek for investments on secondary securities, at a high rate of interest; investments which a mutual society must avoid, and which even other offices, especially those on the mixed plan, should shun until a sum sufficient (with future premiums) to meet all claims is set apart in the best securities which the state of society offers.

If the party over whose life the assurance is made cannot appear before the directors, or any one appointed by them, a *fine* varying from 10s. to £1 per cent. on the sum assured is usually charged for non-attendance. A few offices likewise require a small *deposit* of 2s. 6d. per cent. on lodging the proposal; others 5s. or 10s. per cent. as *entry-money*. In all cases, however, there is a *duty* to be paid to government on the policy, which, when the sum is not above £50, is 2s. 6d.; above £50 and not above £100, 5s.; above £100 and under £500, £1; when £500 and under £1000, £2; £1000 and under £3000, £3; £3000 and under £5000, £4; £5000 and upwards, £5. There is thus always an addition to the first year's premium; but in the policy the premium only is named, as on the regular payment of this sum its existence depends. The *time* allowed for payment of the periodical premium varies in different offices from 15 days to 3 months after the date it is due; but in most offices the forfeiture of the policy may be prevented by paying a fine of from 10s. to £1 per cent. on the sum assured, within a farther limited time, and giving a warranty that the individual is in good health.

The consideration for an ordinary assurance is, as already noticed, generally paid in equal annual premiums; but many other plans are held out to suit the convenience of the assured. Thus, it may be paid—in half-yearly or quarterly instalments—according to ascending or descending scales of premiums, or by premiums payable during a limited number of years. Some offices also will accept of one-half of the annual premiums for the first five or seven years, leaving the other half, with interest at 5 per cent., to be paid afterwards, or deducted at death from the amount assured.

Exceptions are introduced into most policies declaratory of their being void in the following cases:—1. Death beyond the limits of Europe, or at sea, except in passing from one part of the kingdom to another, or to or from the Continent, within certain boundaries,—as betwixt Hamburg and Bordeaux. 2. Entering into naval or military service without the previous consent of the company. 3. Death by suicide. 4. Death by duelling; and 5. Death by the hands of justice. The three last, however, are not understood when the assurance is on another's life; and in some offices, onerous assignees to policies opened by persons on their own lives may be similarly protected, to the extent of their *bona fide* interest.

Extra Risks are always the subject of special agreement. In this class are comprehended lives above 60, persons going beyond the limits of Europe, and persons whose lives are on the ground of health, or, from the nature of their employment, not assurable at the common rates of premium. Such risks are taken by many offices; but the assurance of lives avowedly diseased is chiefly confined to the Asylum, the Globe, and a very few others.

The *Assignation of the Policy* is sanctioned by law; and it may form a security for sums advanced, or become an object of sale. The holder of the policy in these cases pays the future premiums, and his advantage consists in possessing a policy at a less premium than he must have paid at the present age of the party on whose life the assurance was effected. As the probability of life is continually diminishing, the value of the policy will obviously depend upon the length of time it has endured. Thus, if a policy of £100, originally granted on a life of 25, is exposed to sale when the party attains the age of 60, the purchaser will, according to the subjoined table, have to pay only £2, 2s. 5d. annually during the existence of the policy; whereas, if he had taken out one at the present age of the party, his premium would be £6, 6s. 6d.; and for the excess of the latter above the former, namely, £4, 4s. 1d., a price is fixed. The value of a policy may also depend upon the future annual contributions being paid under a guarantee by the assigner, or from a fund set apart by him; or upon the premium having been paid in a gross sum when the policy was opened. In general, however, it may be observed that a policy must be most valuable to the party assured himself, and less so to others, according to their convenience of paying the premiums, and obtaining proper information respecting the party in whose life they are interested. On this account, and perhaps for the still weightier reason that all who sink capital to be drawn back upon a contingency, stipulate for a much higher than common return of interest (independent of the chances of life), policies are sold at very disproportionate prices. Most assurance companies are willing to treat for a renunciation of the policy: but where it has been opened for family purposes, and the assured's circumstances become reduced, an endeavour is frequently made, particularly where the policy has endured for a considerable time, to retain it among his friends. Of late years, several offices have adopted the plan of granting loans on the security of their policies.

On the Expiry of the Life Assured the office requires production of certain documents,—such as the register of the burial of the deceased, and references to the medical persons and others who attended him in his last illness; and, if he opened the policy himself, the probate of his will, or, if it has been assigned, a copy of the assignment. The time when the sum assured is paid varies in different offices; but is commonly within three months after proof of the death. In this interval due investigation is made; and every thing having been found satisfactory, the claimant brings with him the policy, and a receipt for the sum, which is immediately paid to him. Where a claim is payable in the event of a person being alive at a certain time, his appearance before the directors, or a person appointed by them, is requisite, or sufficient proof must be given that he was alive at the time defined by the policy.

The following, extracted from the tables of the Pelican, a proprietary company, shows the rates payable at different periods of life for assurances under different circumstances:—

SINGLE LIVES.

TABLE of Annual Premiums required for an Assurance of £100 on a Single Life for one Year, seven Years, and the whole Term of Life.

Age.	One Year. £ s. d.	Seven Years. £ s. d.	Whole Life. £ s. d.	Age.	One Year. £ s. d.	Seven Years. £ s. d.	Whole Life. £ s. d.
15	0 17 6	0 18 8	1 13 6	38	1 12 2	1 15 3	3 0 0
16	0 17 11	0 19 1	1 14 3	39	1 13 2	1 16 5	3 1 9
17	0 18 4	0 19 7	1 15 0	40	1 14 3	1 17 7	3 3 7
18	0 18 9	1 0 0	1 15 10	41	1 15 4	1 18 10	3 5 6
19	0 19 2	1 0 6	1 16 8	42	1 16 6	2 0 2	3 7 6
20	0 19 7	1 1 0	1 17 7	43	1 17 9	2 1 7	3 9 7
21	1 0 1	1 1 6	1 18 6	44	1 19 0	2 3 1	3 11 9
22	1 0 7	1 2 1	1 19 5	45	2 0 4	2 4 8	3 14 1
23	1 1 1	1 2 8	2 0 5	46	2 1 9	2 6 5	3 16 5
24	1 1 7	1 3 3	2 1 5	47	2 3 3	2 8 2	3 18 11
25	1 2 2	1 3 11	2 2 5	48	2 4 9	2 10 1	4 1 7
26	1 2 9	1 4 7	2 3 6	49	2 6 6	2 12 1	4 4 4
27	1 3 4	1 5 3	2 4 7	50	2 8 4	2 14 3	4 7 3
28	1 3 11	1 6 0	2 5 9	51	2 10 3	2 16 7	4 10 4
29	1 4 7	1 6 9	2 7 0	52	2 12 4	2 19 0	4 13 6
30	1 5 3	1 7 6	2 8 3	53	2 14 6	3 1 7	4 16 11
31	1 6 0	1 8 4	2 9 6	54	2 16 10	3 4 4	5 0 5
32	1 6 9	1 9 2	2 10 10	55	2 19 4	3 7 4	5 4 2
33	1 7 7	1 10 1	2 12 3	56	3 1 11	3 10 6	5 8 2
34	1 8 5	1 11 0	2 13 8	57	3 4 9	3 13 10	5 12 4
35	1 9 3	1 12 0	2 15 2	58	3 7 8	3 17 6	5 16 10
36	1 10 2	1 13 0	2 16 9	59	3 10 11	4 1 5	6 1 6
37	1 11 2	1 14 1	2 18 4	60	3 14 4	4 5 7	6 6 6

SURVIVORSHIPS.

Annual Premiums required during the Joint Lives of two Persons A and B, to secure £100 payable at the Death of A, provided B be then living.

Age of A	Age of B	Annual Premium. £ s. d.	Age of A	Age of B	Annual Premium. £ s. d.
15	15	1 7 5	40	15	2 17 7
	20	1 6 8		20	2 16 8
	30	1 5 1		30	2 14 5
	40	1 3 6		40	2 11 2
	50	1 1 11		50	2 7 2
	60	1 0 4		60	2 2 11
	70	0 18 9		70	1 18 9
	80	0 17 0		80	1 14 4
20	15	1 11 6	50	15	4 1 5
	20	1 10 8		20	4 0 7
	30	1 8 10		30	3 18 4
	40	1 6 11		40	3 14 11
	50	1 5 0		50	3 9 11
	60	1 3 1		60	3 3 7
	70	1 1 3		70	2 16 9
	80	0 19 2		80	2 9 8
30	15	2 2 1	60	15	6 1 0
	20	2 1 2		20	6 0 2
	30	1 19 0		30	5 18 1
	40	1 16 5		40	5 14 10
	50	1 13 7		50	5 9 7
	60	1 10 9		60	5 1 6
	70	1 8 1		70	4 10 9
	80	1 5 1		80	3 18 4

LAW OF INSURANCE ON LIVES.

The principles set forth in relation to the other two great branches of the contract are to be considered as applicable to this branch, in so far as they are not inconsistent with the different circumstances of the transaction. If the policy be not on the life of the insurer himself, he must have some pecuniary interest in the life insured, in terms of 14 Geo. III. c. 48; and no farther sum can be recovered on a loss than to the extent of the interest. "Very few questions," says Mr Ellis, "have arisen upon the subject of interest, because the offices are never in the habit of taking that objection, unless they are under the necessity of resisting payment upon some other fair and proper ground, as fraudulent misrepresentation or concealment; and if they are driven to resist on such a ground, they then, in order to make their case the stronger, sometimes also object to the want of interest, when the policy is open to the objection" (123). Where a policy of insurance in which there was no such interest as would found a claim *in law* was sold, an action to recover back the purchase-money was dismissed, as it was shown to be the practice of the office to pay in such cases (Barber *v.* Morris, 1831. *Ellis*, 124). A creditor has an insurable interest in his debtor, but if the debt is paid in any manner, the interest ceases, as in the case of Mr Pitt's coachmaker, who, with his other creditors, was paid from a parliamentary grant (Godsal *v.* Boldero, 9 *East.* 72). [POLICY.] The holder of a note for money won at play has no insurable interest. Having to pay a fine, or as it is called in Scotland, a grassum, as the condition of a lease on the death of any individual, is an ordinary insurable interest on his life.

Warranty and representation are of great importance in this species of insurance. It is usual for the party to sign a specific declaration regarding his age, health, and habits; and if this be part of the policy, its contents are of the nature of warranties. The warranty that the person "is in good health at the time of making the policy" does not infer perfect freedom from disorder. The question is, whether the life is "a good one," which it is if there be nothing that positively reduces the chance of the individual living as long as the average of other people. A person slightly diseased, namely, by occasional rheumatism, may die of an increase of the disorder; but the chances of his doing so are scarcely more than that a man in perfectly sound health may, within the same time, fall a victim to a deadly disease. If there be a fixed consumption, however, or disease of the heart, the seeds of death are planted,—the subject is clearly a damaged one, and though it may hold out for some time, the chances are against it, and it is far from being worth the same sum with an undamaged commodity. It is now the practice to require some specific answers to certain questions as to the party's health, namely, if he has had the smallpox, or has been inoculated? If he has had the gout? if he is ruptured? and, undoubtedly, false answers to such questions will vitiate the contract. It is the practice to follow up with the question whether there be any disease tending to shorten life? And the answer must be given on the above principles. Where the insurance office demands no warranty or special information, it takes the risk of the life being a good one, subject to the exception of fraud. There may always be fraud in the concealment of material facts. It is held that the person insuring is not to be the judge of what is material, and that it will not avail him to prove that he did not think the circumstance material, and, on that account, did not communicate it; so that, whenever there is any thing in the position of the insured, whether as to health or habits, which distinguishes him from the generality of men, it is not safe to omit stating it. "The contrary doctrine," says Mr Justice Bayley, "would lead to frequent suppression of information, and it would be extremely difficult to show that the party neglecting to give the information thought it material. But if it be held that all material facts must be disclosed, it will be the interest of the assured to make a full and fair disclosure of all the information within their reach" (Lindenau *v.* Desborough, *Ellis*, 114). If the person has been seriously ill recently before the insurance is effected, that circumstance ought to be mentioned, and reference should be made to the physician who attended him. A certificate is generally required from the usual medical attendant, and if, instead of the physician who has been recently attending, one who attended at a distant period only is adduced, the policy will be vitiated. It is usual to apply for information to a private friend, the truth of whose statements is material to the validity of the policy. In Scotland, in a case where the answer of the private friend to the question "Can you give any and what information respecting his habits? whether active or sedentary? temperate or free?" was, "he takes moderate exercise, and is temperate in his living;" and that to the question "do you know any reason why an assurance on his life would be more than usually hazardous," was, "I know of none;"—the concealment of an excessive habit of opium-eating was held material (Forbes & Co. *agt.* Ed. Life Assur. Co., 9th March, 1832, 10 *S. & D.* 451). A person insuring on the life of another is in all respects in the same situation which that person would be in if insuring on his own life, in respect to concealment, representation, and warranty; and his ignorance of the circumstances does not protect him if he give false information, or conceal material facts.—(*Park*, 636-652. *Marshall*, 770-784. *Ellis on Fire and Life Insurance.*)

INSURANCE (MARINE) is insurance against perils of the sea and enemy, including the chances of fire, piracy, and barratry. Its introduction is believed to have been coeval with that extraordinary development of maritime and commercial enterprise which distinguishes the 15th century. But a long period elapsed before its practice became general; nor was it until after the middle of last century that in this country it was subjected to clearly defined laws,—an advantage which was then conferred upon it mainly by an admirable series of decisions by Lord Mansfield, Chief-justice of the King's Bench between 1756 and 1788. It differs from fire and life insurance both in the mode of transacting the business and in the diversified nature of the risks against which security is sought. The great emporium of marine insurance is London, where it is effected chiefly through means of individual underwriters, who congregate at Lloyd's Subscription Rooms, in the Royal Exchange. Indeed, until 1824, with an exception in favour of two chartered associations, the Royal Exchange and London Assurance Companies, it was not lawful in England for any two or more individuals to combine together for taking upon themselves sea-risks; but in that year an act was passed which allowed any number of persons to associate themselves together for undertaking marine insurances; and many joint-stock companies have been since formed and put in action for that purpose, both in London and other ports, though nearly all the great adventures, and a large proportion of the other business, continue to be taken to individual underwriters at Lloyd's.

The establishment of Lloyd's may be regarded as the focus of the maritime commerce of the world. [LLOYD'S.] There is scarcely a seaport of any consequence in which the committee has not an agent, whose duty it is to survey all ships launched, and to continue from time to time to transmit all necessary information about them; also to give intelligence of all departures and arrivals, ships spoken with at sea, wrecks, accidents, and the state of the weather; likewise, in case of damage to goods insured, to examine and report their condition, and generally to watch over the interests of the underwriters. In this way that body of men are supplied with every information which it concerns them to possess; and as, besides all British ships, a large proportion of those of other states are registered in their books with every minute particular, they have seldom more hesitation in accepting insurance on a foreign vessel than on one of this country.

Merchants and shipowners sometimes transact their own business at Lloyd's, but more commonly insurances are effected through the medium of brokers, who are remunerated, not by the assured—their employers—but by the underwriters, with whom they have a current account; their regular allowance is 5 per cent. on the amount of the gross premium in each case, and, in addition, 12 per cent. upon the net amount of premiums paid by them at the end of the year, half-year, or other period, when the broker makes a settlement, after deducting all losses and averages recovered for the assured. As some compensation for the 12 per cent., which he foregoes in the case of loss, the broker charges the party assured 10s. per £100 upon the amount recovered. The underwriters seldom run a hazard to any large amount upon one ship; their principle of transacting business is to distribute their risks over as many vessels as they can, so as to lessen the proportionate probability of great loss; and hence few will subscribe more than £500 or £600 on one ship; indeed, the average may be reckoned nearer to £200; but the policy is handed round among the underwriters until the required amount is filled up; and thus, when an adequate premium is afforded, no difficulty is experienced in getting assurances to almost an unlimited extent.

Insurances of moderate amount are in general effected with greater facility and despatch with a company,—the risk being commonly accepted or rejected at once by their manager. These companies, as at Lloyd's, all allow 5 per cent. discount or brokerage on the premium; but their practice is not uniform in other respects. The following are the terms of the Marine Insurance Company of London:—"All parties to be allowed 5 per cent. brokerage and 10 per cent. discount for cash. Current credit accounts to be opened with the consent of a board of directors, the same to close on the 31st of December in each year, and the balance to be paid on or before the 5th of April following, when 12 per cent. discount will be allowed upon the balance, such discount to be forfeited if the balance be not then paid."

In some places there are clubs, or mutual insurance associations, in which no premium is paid, but each member is periodically called upon to defray a proportion of the losses sustained,—the rate of his contribution depending upon the value of the property hazarded by him. These clubs are usually confined to particular branches of trade, as the coal-trade, where the risks incurred by all the members are commonly equal in degree,—a condition essential to render the association equitable.

The rate of premium varies of course according to the quality of the ship, the season of the year, and the nature of the voyage. It is not based, as in life assurance, upon any systematic arrangement of facts, but is deduced, as in fire insurance, merely from a loose general estimate of the risk. For an account of the stamp duties payable, see the head POLICY.

In effecting an insurance, merchants should take care that their policy covers not only the full value of their property, but likewise the expenses of insurance and recovery in case of loss or damage.

LAW OF MARINE INSURANCE.

Parties.—Any individual, whether a British subject or an alien, may insure his interest in a vessel, provided he be not an alien enemy. It has been generally provided by temporary acts during war, that no foreign enemy's interest shall be insured in the United Kingdom, with penalties against underwriters contravening. By common law, however, no alien enemy can recover on a policy during the continuance of hostilities, whether it has been entered into before or after the declaration of war; nor can an action be maintained by any one on an insurance on the property of an alien enemy. A license to trade with this country granted to an alien enemy, does not remove his personal disability to sue in his own name, but it incidentally legalizes an insurance on his goods shipped for the benefit of British subjects, so as to enable his agent here to sue upon it. No insurance can be recovered on, for a loss occasioned by British capture, as was decided where the insurance on a French vessel was made before the war in which she was captured, and action raised after the cessation of hostilities (Gamba *v.* Le Mesurier, 4 *East.* 407). It is held, indeed, that losses happening during the existence of hostilities between the respective countries of the insured and insurer, must be considered as excluded from the perils in the policy. It is said that British property may lawfully be insured against British capture, seizure, and detention, it being presumed that any loss so occasioned would be caused by mistake. An English subject living under the protection and acting for the benefit of a foreign state, is looked on as an alien enemy in respect of any insurable interest. Mere residence in a hostile territory, however, does not constitute such a disqualification. A neutral, though residing in a hostile territory, and in partnership with an enemy, may insure his share of the interest. The parties who, in this country, are entitled to carry on the business of marine insurers or underwriters, have been already described.

Subject: Interest.—The insured must have an interest in the subject. By 19 Geo. II. c. 37, for the purpose of suppressing wager-policies, it was enacted that no insurance "on any ship belonging to his majesty, or any of his subjects, or any goods, merchandises, or effects, &c." should be made, "interest or no interest, or without farther proof of interest than the policy, or by way of gaming or wagering, or without benefit of salvage to the assurer;" and assurances in contravention of the act are null. There is an exception in favour of British privateers, on which insurances may be made, interest or no interest, free of average, and without benefit of salvage to the insurer; and by § 3, effects coming from places belonging to the crown of Spain or Portugal are excepted. It has been decided that the statute does not extend to foreign property in foreign ships, and therefore a condition that the policy is to be deemed sufficient proof of interest, in case of loss, in such a case is binding, and renders the policy sufficient proof accordingly (Thellusson *v.* Fletcher, 1 *Doug.* 315). In cases where the act requires an interest, if the person insured part with his interest, the insurance falls. The indorsement of a bill of lading to a creditor is held on the face of the transaction a transference, to the effect of terminating an insurance; the parties, however, are entitled to show that their understanding of the transaction was different. An insurable interest does not require to be a direct right of property. Any valuable interest arising from the subject, unless specially excluded (as is the case with seamen's wages) may be insured, *e. g.* the commission, or privileges, of the captain, and money expended by him for the use of the ship, expected profits, freight, and interest in bottomry and respondentia bonds. An owner may even insure, under the head of freight, the benefit which he derives from carrying his own goods. When freight is insured, it must be shown, before recovery, that but for the loss the vessel would have earned her freight, or that she was in the course of earning it, viz. by having her cargo on board. The wages of seamen are not insurable on grounds of public policy, it being considered necessary to exclude them from any interest apart from the safety of the ship. Re-insurance, or insurance against the loss to which the underwriter may be liable, is prohibited by 19 Geo. II. c. 37, unless in the case of the insurer becoming insolvent or bankrupt, or dying, in which case his assignees, executors, or administrators may re-insure, provided it be set forth on the policy that it is a re-insurance. A double insurance is not void, though made with the view of double satisfaction in case of loss, but the insured cannot recover on the policies collectively more than his loss. He can either sue on both rateably, or on one, and in the latter case, the underwriters who pay have relief against those in the other policy. As to the subject which forms the interest, "in general it may be laid down as a rule, that no insurance can be made on any species of goods and merchandises intended to be imported or exported, contrary to the laws of this kingdom, or those of its dependencies, or to the law of nations; and that if the intended commerce be contrary to any of these laws, an insurance made to protect it will be illegal and void" (*Marshall*, 52). When both parties are aware of the illegality,—as in other illegal pactions, neither party has an action against the other for performance of his covenant; and so, though he may have paid the premium, the insured cannot recover on a loss. By the act for consolidating the laws against smuggling, 3 & 4 Wm. IV. c. 53, § 46, there are penalties against the parties engaged in such insurances. [SMUGGLING.] It is no defence, however, in an action on a policy, that the subject-matter of the insurance has come into existence through an infringement of the revenue law of some other country. If a general insurance be effected on goods, part of which is of a nature to make the voyage illegal, and the ship and cargo liable to be seized in terms of the revenue laws, the policy is entirely vitiated; but, if no part of the cargo but that illegally conveyed is liable to forfeiture, the insurance will be good as to the remainder. Insurance on contraband of war is void, and so on any trade carried on in contravention of a British embargo. [CONTRABAND. EMBARGO.]

Risks or Perils.—Perils usually insured against are as follow:—

1*st*, *Of the Seas.*—The expression comprehends those injuries or losses which proceed directly from natural causes, and are not designedly done by the hand of man; it embraces injury from stress of weather, winds and waves, lightning, rocks, sandbanks, &c. A loss arising from the misconduct or ignorance of the master or crew is not considered as by a peril of the sea, nor is one from the internal condition of the vessel, as where it becomes worm or rat eaten. It is a peril of the sea when the vessel receives damage by taking the ground in a dry harbour, owing to the tide having left her, or when one ship is run down by another, or when loss is immediately caused by the convulsion of the elements, though remotely occasioned by some act of carelessness. Where a vessel is driven ashore by stress of weather, and there captured, it is not a peril of the sea, but of enemies. Where two of the crew were sent on shore to make fast a rope, and were impressed before they could do so, in consequence of which the ship went ashore nearly at high-water, where she grounded, and was much strained, and made a great deal of water before she could be got off—it was held a loss by peril of the sea.—(Hodgson *v.* Malcolm, 2. *N. R.* 336.)

2*d*, *From Fire.*—Whether occasioned by the negligence of the master or crew, by malicious design, or in furtherance of public policy,—as where a ship is burnt to prevent her from falling into the hands of an enemy. If goods are shipped in a damaged state, and internal combustion arise, the insurers of such goods are not liable.

3*d*, *From Enemies.*—The principal losses from this source are by capture. The underwriter becomes liable from the moment of capture, and is not entitled to wait for a formal alienation of the property by condemnation or otherwise; retaining, however, an equitable right in the case of recapture, to have his responsibility reduced to the extent of the actual loss occasioned, as by salvage, &c. The underwriter will not be relieved though he show that a capture was occasioned by connivance with the master. The only manner in which there can be a deduction from the full loss in the case of a captured vessel, is in the case of recapture; the ransoming captured vessels is prohibited under severe penalties (22 Geo. III. c. 25). Detention by embargo is one of the perils from enemies, and it is generally specified in the policy. [EMBARGO.] There can be no recovery on an insurance against British capture.

4*th*, *Pirates, Rovers, and Thieves.*—This includes all those acts of violence and fraud, which not being done by governments in the course of hostilities, resemble robbery and theft on shore. Where a ship loaded with corn was compelled by stress of weather to enter Ely harbour, where there was a scarcity of corn, and was forced by a mob, it was held a loss by pirates.—(*Marshall*, 511.)

5*th* *Jettison*, and 6*th* *Barratry*. See these heads, and AVERAGE.

These particulars are usually followed in the policy by the general definition "all other perils, losses or misfortunes, that have or shall come, to the hurt, detriment, or damage of the saids goods and merchandises, and ship, &c., or any part thereof." This general expression has become limited by practice and law to certain descriptions of loss. The destruction of the ship through any principle of internal decay,—as by worms or rats, is not covered by it. Though loss occasioned by capture be one of the risks specifically insured against, it would appear that loss occasioned where the voyage is abandoned *on account* of the risk of capture, does not come under the general clause; so it was found in a case where, it having been ascertained that the port of destination of an insured vessel was shut up against the British, the ship proceeded elsewhere, and sold her cargo at a loss (Hadkinson *v.* Robinson, 3 *Bos. & Pul.* 388). Where a vessel is fired on by mistake for an enemy, the loss is held to be covered by the general clause. There are some risks excluded from the insurance by what is termed the common memorandum. [POLICY.] There are certain injuries to ship and goods which the shipowners must bear, in relation to the former, and indemnify as to the latter, notwithstanding insurance. If the ship was not seaworthy at the commencement of the voyage, they are liable for all loss, as likewise for loss or damage arising from the defect.

The Duration of the risk is a matter of importance. As to goods, if they are insured to be loaded at a particular place, they will not be covered if loaded elsewhere. Under the usual form of policy, the risk does not commence till the goods are actually on board, "and it may be laid down as a general rule, that the risk on goods continues no longer than they are actually on board the ship mentioned in the policy, or in boats for the purpose of being landed; and that if they be removed from on board and landed, or put on board another ship without the consent of the insurers, the contract is at an end, and the insurers are discharged from all subsequent responsibility" (*Marshall*, 249). But if the vessel be disabled on her voyage, and the goods be shifted on board another, to be conveyed to their destination, the insurers continue liable; so also if it be a condition that the goods are at a particular place to be transhipped into other vessels, and these other vessels not appearing, they are transferred to a storeship. As to the ship, if the insurance be *from* the port, the risk commences when the vessel breaks ground; if *at* and from the port, it commences with her arrival at the port, or, if she is there at the time, at the execution of the policy. In the former case, however, the vessel must have arrived seaworthy, or at all events in a state to be repaired and equipped for the voyage. If the insurance be on the ship "in the same manner" as that on the goods, and the latter do not attach, the former falls with it. It is usually stipulated that the risk shall continue "until she hath moored at anchor 24 hours in good safety," and when such is the case, a loss happening after the time is not insured against, though the *cause* existed before the vessel was moored. The underwriter is indeed in all cases relieved if the loss does not actually take place till after the period fixed for the termination of the risk, though the event by which it is occasioned, and one which could not but occasion a loss, has happened before—as where a vessel springs a leak, and is kept afloat by pumping.

Premium.—The consideration on which the insurer undertakes to indemnify the insured is so termed. In marine insurance there is this peculiarity, that there is a claim on the part of the underwriter, for the stipulated premium, after receipt of it is acknowledged in the policy. This practice was first employed to exclude litigation on the ground of want of consideration in actions for loss: it afterwards became a convenient arrangement for facilitating the transactions of this department of business. The merchant has no time, at the critical moment when he wishes to insure, to make inquiry as to who will undertake the risk in the particular case; while there are capitalists ready to incur such risks of any description, at a corresponding premium. Between these two parties the insurance brokers drive their business, finding for the underwriters merchants who wish to be insured, and for the merchants underwriters who will undertake the risks. To facilitate this arrangement, the broker takes on himself the relations of debtor and creditor between the parties. He keeps an account, putting down all premiums to the underwriter's credit, as already received, placing against them return premiums and losses, and settling periodically with the underwriter. It was formerly held that the receipt did not bar the underwriter's claim from the *insured*, but it was decided otherwise in 1808 (Dalzell *v.* Main, 1 *Camp.* 532). It leaves, however, the claim of the underwriter against the broker, and that of the broker against the insured, open. The premium and the risk are counterparts of each other, and if the latter do not exist, the former cannot be retained. If through mistake or misinformation an insurance be accomplished where there is no interest, or on an interest far below that nominally insured for, there will be a claim for return of the whole premium in the one case, and for a proportional part in the other. If there are several policies negotiated to an extent far above the real interest, and without fraud,—as, in the case of loss each underwriter would have to pay his proportion, without regard to priority, so each will have to return a proportional part of the premium. Upon a wager policy the insured cannot recover the premium after the risk is run, though it would appear that he may do so before it is run; and "though there be nothing illegal in the contract, and the insured effect the insurance in the conviction that he had a good insurable interest; yet, if the risk be run, and the ship arrive safe, he cannot come upon the underwriters for a return of premium, on the ground that he had no legal title to her. But if a loss happen, in the case of a *bonâ fide* insurance, and the underwriters resist the claim of the insured on the ground of want of interest, they will not be allowed to retain the premium" (*Marshall*, 652). The premium is earned, and cannot be redemanded if the circumstances are such that at any time, had a loss happened, the underwriter would have been liable to the full amount insured for. Where the transaction is illegal, and the underwriter in consequence resists payment of a loss, the law does not require the premium to be returned. In the case of material fraud on the part of the insurer, the contract is void, and the premium must be repaid. There is no return of premium where the contract is vacated through the fraud of the insured or his agent, though this doctrine was formerly much modified. Where the voyage is divisible into several distinct risks, and some of these have not been run, a corresponding portion of the premium is returnable. There can be no return of part of a premium where the risk is for a term which has begun to run. A premium, or part of it, may be returnable by stipulation on the policy.

Loss and Adjustment.—The loss in marine insurance is either total or partial. The former does not infer the total extinction of the matter insured, but if it be properly abandoned to the underwriters, on account of the extent of the loss, that loss is considered total. [ABANDONMENT.] Where the policy is valued, the amount of a total loss is fixed and settled, subject to modification if fraud be proved. [POLICY.] Where the policy is not valued, the amount remains to be adjusted. "If the policy be an open one, it is an invariable rule to estimate a total loss, not by any supposed price which the goods might have been deemed worth, at the time of the loss, or for which they might have been sold had they reached the market for which they were destined, but according to the *prime cost*, that is, the invoice price, and all duties and expenses incurred till they are put on board, together with the premium of insurance. This is the only true, at least the only legal mode of estimating a loss, whether total or partial, on goods; and whether the goods shall have arrived at a good or a bad market is always immaterial. Neither is the difference of exchange to be at all regarded in the adjustment; for the underwriter does not insure against any loss arising from such causes." (*Marshall*, 632.)

The ship is valued at the sum she is worth at the time of sailing, including expense of repairs, value of apparel, provisions, and stores, money advanced to the sailors, and all other expenses of outfit, together with the premium of insurance. A loss at first total may merge into a partial one; as where the ship is captured and recaptured. In the case of a partial loss on cargo, in an open policy, the amount of indemnity to be paid by the underwriters is calculated on the same principle as that above laid down for a total loss, viz. the cost of the goods—not the price they may bring. To ascertain this, the sum they would bring if they arrived uninjured at their destination is adopted, and the price they actually bring is deducted. The sum they have cost being then stated, a sum bearing to that the proportion which the actual proceeds bear to what would have been the proceeds were the goods undamaged, is found, and deducted from the cost-price—the difference is the sum to be paid. Thus, suppose the goods purchased at £100; that, if they had arrived undamaged they would have brought £150, but, being damaged, have only brought £50, then as 150 : 50 : : 100 to £33, 6s. 8d. That sum deducted from £100, viz. £66, 13s. 4d. is the sum to be paid by the underwriters. Suppose the same goods brought to a falling market, where if undamaged they would bring not more than £75, and that being damaged they bring but £25—the same result would follow. It thus happens that when the market is a good one, the merchant will lose by his insurance—if a bad one he will gain. The underwriter is not responsible for loss arising from the duties or charges to be paid on the goods at their arrival; and so the price which forms the datum for calculating the loss, is the gross and not the net price. The premium of insurance and commission are added to the cost-price. In a valued policy, the sum at which the goods are valued (if there be no fraud) should be taken instead of the cost-price; a comparison between the sum brought by the damaged goods and what they would have brought undamaged, being taken as the medium of calculation, as above stated. Where the goods are sold short of the port of destination, for behoof of the underwriters, the proper sum to be paid by them is the difference between the value (if on a valued policy), or the average price (if on an open policy), and the sum brought; in other words, they take the goods, and pay the original sum insured. Where partial loss is suffered on a ship which is repaired by the owner, the sum to be paid is the cost of repairing, with a deduction of one-third, in consideration of the value of the new materials.

The settling and ascertaining the amount of a loss, with the proportion of it which each underwriter has to pay, is termed "adjustment." Being indorsed on the policy, and signed by the underwriters, with a promise to pay within a given time (as it generally is, except where the liability is disputed *in toto*), it amounts to an admission of the claims of the insured as against them, and precludes them from calling on him for farther proof. It is not, however, conclusive against the underwriters, who, until payment, may plead any defence, going to the validity of the transaction, such as misrepresentation or breach of warranty, but the proof will lie with themselves, and they will have to make out a strong case.

Representation is the term technically applied to any material statement, either verbally or in writing, by the insured to the insurer, if it contain collateral circumstances on which the latter may be supposed to calculate the extent of the risk. Warranty is a condition, and unless it be fulfilled, the contract is void. Representation is only the ground on which the contract is entered on, and if it be false, the insurer can only be relieved by showing that he has been misled as to the nature of the risk he has insured against. A warranty appears on the face of the policy,—representation is on a separate writing, or is parole [WARRANTY]. The last representation is the obligatory one, and if it be inconsistent with an earlier representation, will readily have the effect of neutralizing it. Thus, where a ship was represented as American on presenting the slip, but at the subscribing of the policy it was merely stated generally "that it was an insurance on goods in the Hermon," the ship was held not to have been represented as American (Dawson *v.* Atty, 7 *East.* 367). If there is no subsequent statement, however, a representation made at the time of signing the slip will rule. If there is a material misrepresentation, it is not necessary for releasing the underwriter that it be shown to be fraudulent. "A representation," says Lord Mansfield, "must be fair and true as to all that the insured knows; and if he represents facts without knowing the truth, he takes the risk upon himself." And so, where the insured represented the ship safe on the 11th, whereas she was lost on the 9th, this, though merely the result of his calculation, released the underwriter (Macdowall *v.* Fraser, 1 *Doug.* 260). A wilful misrepresentation on a point material to the risk voids the contract, and the insured will not recover though the loss arise from circumstances unconnected with the representation.

A particular form has for two centuries been in use, in which the majority of policies are effected in England, unless when there are peculiar conditions to be inserted. It will be found with its several clauses under the head POLICY. If the policy contain warranties on the part of the insured, these must turn out strictly true, otherwise the obligation of the underwriter ceases to be in operation from the moment when they become untrue [WARRANTY]. There are certain duties on the part of the insured deemed necessary for the security of the underwriter from fraud, which are tacit obligations created by the existence of the contract, such as that the vessel shall be seaworthy, and shall not deviate from her proper course. [SEAWORTHINESS. DEVIATION. ABANDONMENT.] (*Park on Insurances. Marshall on Insurance.*)

INTEREST is defined by economists to be the net profit of capital; but, in the commercial acceptation of the term, it may be more correctly described as the consideration agreed to be paid for the use of money. The sum on which the interest is reckoned is called the *Principal*, and the sum per cent. agreed on as interest, the *Rate*. The latter, viewed apart from legislative interference, is in the general case determined by, 1*st*, the average rate of profit derived from the employment of capital; 2*d*, the security afforded for the repayment of the principal; and, 3*d*, the duration or convertibility of the loan.

1. That the rate of interest allowed on borrowed capital must, in the general case, bear a proportional relation to the average rate of profit yielded by its employment

seems evident. Much will be given for the use of money when much can be made of it; but, on the other hand, no man will pay more for its use than he has a prospect of making by its investment. Hence, in newly settled countries, where the facilities for the advantageous employment of capital are great, interest is high; while, in older countries, where these facilities are comparatively less, interest is low. In the United States, Canada, and Australia, interest varies from 6 to 15 per cent.; but in Britain and Holland it rarely exceeds 5 per cent.

2. It must also vary according to the risk attending the repayment of the loan. No person would lend on the personal security of an individual of doubtful solvency at the same rate as on mortgage over a land estate; nor would a capitalist advance money to a nation engaged in war, or distracted by civil commotions, on terms so advantageous as to a state where the government is settled, and the people industrious, contented, and civilized.

3. The duration or convertibility of the loan has also to be taken into account. When the money lent continues available at all times, there exists an inducement for the lender to prefer such an investment, even at a reduced rate of interest, as he thereby retains every chance of its more profitable employment otherwise. On the other hand, where the investment, however secure, requires the capital to be locked up during a considerable time, the lender will naturally demand a higher rate of interest, as all favourable chances are precluded until the expiration of that time. So at present exchequer bills, and deposits in banks, yield only abont 3 per cent., while 4 to 5 per cent. can be obtained on mortgage, or good personal security, where the loan is to continue for a fixed time. This principle, however, does not apply when the market rate of interest is unusually high, as the lender may then consider it of advantage to secure an investment at that higher rate of interest.

Though by these principles, as adjusted by the natural competition of borrowers and lenders, the rate of interest is permanently regulated, yet in all highly commercial communities there are a variety of other causes in operation, which lead to temporary fluctuations. Thus overtrading, a stagnation of credit, public loans, or any other circumstance which leads to a large amount of money capital being withdrawn from the market, will produce for a time a rise of interest much above the average rate; as, on the other hand, a fall below this rate will be produced through the disengagement of capital by a stoppage in any of the usual channels of trade, by payments on account of the public debt (even slightly sometimes by the half-yearly dividends), or by any other circumstance which leads to a large amount of money capital being thrown on the market for investment. The state of war elevates the rate of interest by the general feeling of insecurity which it engenders, as well as by the extra demand created for loans by government.

Besides these influences, a considerable effect has, in most countries, been produced by the *usury laws*, which have interfered to prevent a fair and free market rate of interest, by imposing heavy penalties on all such persons as shall take more than a certain fixed rate. These laws originated in a mistaken interpretation of a text in the Jewish law (Deut. c. 23, v. 20), and in the policy of protecting the poor against tyrannical extortion; but very little reflection is necessary for discovering that, however well adapted they may have been to a former state of society, the case is now widely altered,—money having become as much a merchantable article as any other. In these times, such laws serve occasionally to obstruct mutual accommodation upon terms justified by fair competition, and by a due consideration of the greater or less risk that may attach to the intended application of any capital. They are not less unjust than impolitic, inasmuch as they fail to operate according to the principle of reciprocity: they are, in fact, a direct infringement on the right of property to free disposal and to equal protection, of whatever description such property may be: and they should be considered as holding a place amongst those remnants of barbarism which we are always slow in eradicating.

The legal rate of interest, after successive reductions, was fixed in Britain in 1714 (12 Anne, c. 16) at 5 per cent.; and in Ireland, in 1732, at 6 per cent. These rates, however, have been at various times considerably below the market rate. In 1806, £5, 17s. per cent. was paid on a loan to government (on whom the usury laws are not binding), and at various other periods during the war the rate paid by government was above 5 per cent. Such being the interest on public securities, a much higher fell to be exacted on that of private parties, and a great variety of expedients were accordingly adopted for defeating the usury laws. Landed proprietors borrowed at extravagant rates on redeemable bonds of annuity, while, by the mercantile classes, the law was evaded by collusive transactions in the funds, and by other less reputable devices, in which an extra per centage was naturally levied by the creditor as a guarantee against the risk, and a recompense for the odium attending a breach of the statute. It came at length to be seen and acknowledged that the usury laws produced and magnified the evils they were intended to remedy (*Commons' Report on Usury Laws*, 1818); and in 1833, a clause was introduced into the act renewing the charter of the Bank of England, by which a higher rate than 5 per cent. may be charged on bills not having more than 3 months to run; while, by later acts (7 & 8 Wm. IV. and 3 & 4 Vict. c. 83) this privilege is, until 1st January 1843, extended to bills not having more than 12 months to run; all simple loans of sums above £10 are likewise exempt from the usury laws during the same period, provided they be not on landed or other real security. The act 3 & 4 Vict. c. 83 will doubtless be renewed, and perhaps extended; so that in as far as the mercantile community is concerned, the usury laws may now be considered at an end.

The fluctuations in the market rate of interest in this country rarely exceed 1 per cent., viz. from about 2 to 3, or rather 3½ per cent. on Exchequer bills and deposits in banks; from 3¼ to 4 per cent. on the first class of land securities; and from 4 to 5 per cent. on bills of exchange,—the medium rate being thus about 3½ per cent. Money, however, like all other commodities, is found cheapest where it exists in greatest abundance, and hence the rates in the metropolis are commonly lower than in the provinces, though they are subject to greater fluctuations; the discount on the same class of paper varying at different periods from about 2¼ to 5½ per cent. The general criterion for judging of the market rate at any particular time is the charge made by the banks for discounting a good bill of exchange; but in the higher commercial circles of London, the rate and premium on Exchequer bills are supposed to afford the best indication of the state of the money market; the price of consols, though frequently referred to, is a much more imperfect guide, particularly of late years.

The average rate of interest, and its probable continuance, have of late been a frequent subject of discussion, more especially in reference to Life Assurance Companies and other institutions, whose operations are based on the continuance of a certain fixed rate for a number of years. Mr Babbage and Mr Finlaison, founding upon the price of stock for a lengthened period, have estimated the probable average rate in this country for a considerable time to come at 4 per cent. (*Treat. on Assurance*, p. 20, and *Par. Paper*, 1829, No. 284, p. 35); but, looking to the principles by which interest is adjusted, it is manifest that estimates founded upon such data are entitled to little confidence. The average rate of profit is the limit to which all oscillations in the market rate of interest constantly gravitates; and as the tendency of profits is to fall in all countries as recourse is had to the cultivation of poorer soils, and industry becomes less productive, it follows that the natural tendency of interest is to fall likewise. Happily, this tendency in profits is checked at repeated intervals by improvements in machinery, discoveries in the science of agriculture, better combinations of labour and capital, and greater freedom of commerce; so that the present average rates will probably be maintained for a considerable number of years. The subject is, however, one of acknowledged difficulty; and meantime, Mr De Morgan recommends that the rate assumed by assurance offices should never exceed that at which the government can borrow. —(*Essay on Probabilities*, p. 257.)

Interest is either *simple* where it is always calculated on the original principal sum, or *compound*, where the interest itself is periodically accumulated, or converted into principal. Simple interest is legally due in all cases in which it is stipulated for, unless where it comes within the now limited operation of the usury laws [USURY]; and where not stipulated for, the right may be established by usage. It is due on all bonds, bills, and promissory notes, from the time of payment. By 3 & 4 Wm. IV. c. 42, §§ 28, 29, it is provided that upon all debts or sums certain, payable at a specified time or otherwise, the jury, on the trial of any issue of damages, may allow interest to the creditor at a rate not exceeding the current rate, from the time when the debts or sums certain were payable, if they be payable by virtue of some written instrument at a fixed time, or if payable otherwise, then from the time when a demand of payment has been made in writing, with notice that interest will be claimed from its date, until the term of payment; interest being also payable in all cases in which it is payable by common law. It is farther provided, that the jury, on the trial of any issue or inquisition, may give damages in the nature of interest, over and above the value of the goods at the time of the conversion or seizure, in actions of trover or trespass *de bonis asportatis*, and over and above the money recoverable in all actions on policies of insurance. Where a writ of error has been sued out in any action personal, and judgment given for the defendant, interest is to be allowed by the Court of Error for such time as execution has been delayed.

This act does not extend to Scotland, but the practice there is similar. It is usual in Scotland for bankers' and land-stewards' accounts to be periodically settled, and the interest added to the principal. Compound interest is demandable in such cases; and indeed it is virtually charged in all cases of accounting where balances are periodically accumulated; it is also invariably charged in all calculations of annuities, assurances, and reversions, as for periods beyond one year, it is, in truth, the only method by which the value of money can be properly ascertained. But the law never considers compound interest as directly chargeable on an ordinary debt or loan; though in the generality of cases it would be equitable that this should be done, seeing, that as soon as a sum of money is payable, it matters little whether it be due under the name of principal or interest,—the use of it being of equal value to the owner.

Interest Calculations.—The simple interest of any sum for one year at 5 per cent. is obviously 1-20th of such sum (or one shilling for each pound), and the interest for one day 1-365th part of this 1-20th, or 1-7300th part of the principal; while this last, multiplied by any number, will evidently give the interest corresponding to the same number of days. Hence,—

I. To calculate interest at 5 per cent., multiply the principal by the number of days, and divide the product by 7300.

II. To calculate interest at any other rate, find what it comes to at 5 per cent., and take a corresponding proportion of the same for the rate required.

Ex. Required the interest on £1520, 16s. 8d. for 8 days at 4 per cent.

1520 16 8 or, by decimals 1520·833
8 8
73,00)121,66 13 4 (1 13 4 73,00)121,66·664(1·666 = £1 13 4
Interest 5 per cent............£1 13 4........................1·666
Deduct ⅕.................. 0 6 8........................ ·333
Interest at 4 per cent..........£1 6 8........................1·333 = £1 6 8

Approximations are sometimes adopted in practice; thus, interest at 5 per cent. is calculated by taking one penny per pound per month.

Compound interest may be calculated in the same manner as simple, adding the interest to the principal at each successive period; but when the periods are numerous, recourse must be had to logarithms, or to tables in the manner pointed out in next article.

Simple Interest Tables.—Booth's 5 per cent., Stenhouse's 5 per cent., Dunn's (Decimal) 5 per cent., Marshall's 4 per cent., Pohlman's, &c.

INTEREST (COMPOUND) AND ANNUITIES. Under the head ANNUITY we have given a brief account of that kind of property when viewed merely as a subject of commerce. In the present article we propose to explain briefly the principles of compound interest and annuities, and to furnish popular rules and tables for the solution of the cases which most commonly occur in practice. In so doing, we shall first treat those cases which are founded upon the operation of compound interest alone, and next, those wherein the operation of compound interest is combined with the chances affecting the duration of human life.

I. COMPOUND INTEREST AND ANNUITIES CERTAIN.

The cases which occur under this head may, in a general point of view, be comprised in combinations of the five following quantities:—

The *Principal*, signifying either a principal sum put out at interest, the present value of a sum due at a future period, or of an annuity, or the sum which, being immediately invested, will be exactly sufficient with its accumulations to provide for the said sum due at a future period, or for the instalments of the annuity as they fall due. Under the latter signification it is sometimes called the number of years' purchase the annuity is worth.

The *Time*, or a certain number of years commencing from the present.

The *Rate*, or the ratio which the interest accruing in one year bears to the principal producing it. Thus $\frac{5}{100}$ = ·05 is the rate when interest is at 5 per cent., $\frac{4}{100}$ = ·04 when the rate is 4 per cent., the rate being thus, in all cases, equal to the simple interest of £1 for one year.

The *Annuity*, or the sum falling due at the expiry of each year.

The *Amount*, denoting either the amount of the principal improved at interest for the time, any capital due at a future period, which, by discount is reducible to such principal, or the amount of an annuity for the said time accumulated at interest.

From the relation subsisting betwixt these five quantities, we are enabled, provided any three are supplied as data, to obtain the remaining two. In practice, advantage is taken of this relation to form tables, in which the rate and the time are always given quantities, while a third is denoted by unity. By means of such tables we are enabled to solve, either directly or mediately, all the cases which occur without the aid of analysis, excepting those in which the time and rate are both among the unknown quantities. The tables introduced for that purpose at the end of this article are four in number;* and their construction may be explained as follows:—

Table I.—Principal sum of £1 accumulated, or amount of £1 in any number of years.

The interest of £1 for one year at 5 per cent. being ·05, the sum of the principal and interest, or the amount at the close of the first year will be 1·05. This being the sum on which interest is payable during the next year, a proportional increase will take place at the close of the second year, or $1 : 1{\cdot}05 :: 1{\cdot}05 : (1{\cdot}05)^2 = 1{\cdot}1025$; for the third year, $1 : 1{\cdot}05 :: (1{\cdot}05)^2 : (1{\cdot}05)^3 = 1{\cdot}157625$. In the same manner, this last amount improved at interest during the fourth year will be increased to $(1{\cdot}05)^4 = 1{\cdot}215506$; and so on for each following year, the amount at the end of any number of years being always determined by raising the number which expresses the amount at the end of the first year to the power of which the exponent is the number of years. These results are exhibited in the table, and the same course is followed for the other rates.

Table II.—Principal sum of £1 discounted, or present value of £1 due at the end of any number of years.

The present value of £1 to be received at the end of one year must be such a sum, as being improved at interest for one year will exactly amount to £1, and must evidently bear the same proportion to £1 that £1 does to its amount in one year. Hence, at 5 per cent. $1{\cdot}05 : 1 :: 1 : \frac{1}{1{\cdot}05} = {\cdot}952381$, the present value of £1 to be received at the end of one year. In the same way, $1{\cdot}05 : 1 :: \frac{1}{1{\cdot}05} : \frac{1}{(1{\cdot}05)^2} = {\cdot}907029$, the present value of £1 to be received at the expiration of two years. It will also be found that the present value of £1 due 3 years hence is $\frac{1}{(1{\cdot}05)^3} = {\cdot}863838$; and the same process followed for the remaining years, and for the other rates, will produce the results exhibited in the table.

Table III.—Annuity of £1 accumulated, or amount of £1 per annum at the end of any number of years.

The first payment of an annuity being considered due at the end of the first year from the time of valuation, the second at the end of two years, and so on, it is obvious in considering the amount of an annuity for any given term of years, that, at the expiration of the term, the payment due will be £1 without interest; that due one year before will be £1 improved at interest for one year; that due two years before will be £1 improved at interest for two years, and so on until the first payment, which will be £1 improved at interest for a term one year less than the duration of the annuity. Hence Table III. may be readily obtained from Table I.; the number against any year in the former being just unity added to the sum of all those against the preceding years in the latter.

Table IV.—Annuity of £1 discounted, or present value of an annuity of £1 per annum for any number of years.

The present value of an annuity of £1 for any given term of years is obviously the sum of the present values of £1 due at the expiry of one year, of £1 due at the expiry of two years, and so on until the expiry of the term, which values are given in Table II. as already explained. The number against any year in Table IV. will thus be equal to the sum of the numbers against that and all the preceding years in Table II., from which, therefore, it may be readily formed.

With these preliminary explanations of the tables we shall now proceed to give rules for the solution of the cases which most commonly occur in practice, employing for this purpose the decimal notation, the nature of which we have explained under the head Decimal Fractions.

I. Principal Sums Accumulated or Discounted.

Case 1. Principal, Rate, and Time given, to find the Amount.

Rule. Find from Table I. the amount of £1 at the rate and for the time given, which multiply by the given principal.

Ex. Required the amount of £1500 in 10 years, reckoning interest at 4 per cent. per annum.

$1{\cdot}480244 \times 1500 = 2220{\cdot}366$, or £2220, 7s. 4d.

Case 2. Amount, Rate, and Time given, to find the Principal.

Rule. Find from Table II. the present value of £1 at the rate and for the time given, which multiply by the amount.

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* We have not deemed it necessary to introduce tables to exhibit the annuities whose amounts and present values are respectively equivalent to unity, as the numbers in such tables would be merely the reciprocals of those shown in Tables III. and IV.; i. e. the quotients of unity divided by the numbers in the latter, and which accordingly can be readily made to supply their place by being used as divisors in those cases where the corresponding numbers in the former would be employed as multipliers, and *vice versa*.

Ex. Required the present value of £1087, 5s. 7d. payable at the end of 15 years, or, what is the same, the principal sum which will amount to £1087, 5s. 7d. in 15 years; interest 5 per cent.

·481017 × 1087·279 = £523.

Case 3. Principal, Rate, and Amount given, to find the Time.

Rule. Divide the amount by the principal, and the quotient will be the amount of £1 at the given rate; which look for in Table I. under the same rate, and contiguous to the said amount will be found the time required.

Ex. 1. In what time will £1000 amount to £2813, 17s. 3d. at 3 per cent.?

Here, 2813·862 ÷ 1000 = 2·813862; which, in Table I. under 3 per cent., is found contiguous to 35 years.

When the exact quotient is not found in the table, take the difference between the next highest and next lowest numbers, and also betwixt the quotient and the number nearest to it, and the former will bear to the latter the proportion which one year, or 365 days, will bear to the number of days to be added to or deducted from the years found contiguous to such nearest number, according as it is less or greater than the exact quotient, in order to make up the time required.

Ex. 2. In what time will £100 amount to £265, 12s. 5d. at 5 per cent.?

Here, 265·6208 ÷ 100 = 2·656208. By Table I. the amount of £1 in 20 years is 2·653298, and in 21 years, 2·785963; difference ·132665. But 2·656208 exceeds 2·653298 by ·00291 only; hence, as ·132665 : 365 : : ·00291 : 8, the time required is 20 years and 8 days.

Case 4. Principal, Amount, and Time given, to find the Rate.

Rule. Divide the amount by the principal, and the quotient will be the amount of £1 in the given time, which quotient will be found contiguous to the said time in Table I. under the rate required.

Ex. 1. At what rate per cent. per annum will £400 amount to £569, 6s. 6d. in 9 years?

569·435 ÷ 400 = 1·42331; which, in Table I., is found contiguous to 9 years, and under 4 per cent.

When the exact quotient is not found in the table, an approximation may be made to the rate in a manner similar to that adopted in regard to the time in Case 3.*

Ex. 2. At what rate per cent. per annum will £100 amount to £179, 9s. 4d. in 17 years?

Here, 179·467 ÷ 100 = 1·79467. By Table I. the amount of £1 in 17 years, is at 3 per cent., 1·65284, and at 4 per cent., 1·94790; difference, ·29506. Hence, as 1·79467 exceeds 1·65284 by ·14183, we have ·29506 : 1 per cent. (the difference between 3 and 4 per cent.) : : ·14183 : ·48069; and the rate required is 3·48069, or about 3½ per cent.

II. Terminable Annuities.

Case 5. Annuity, Rate, and Time given, to find the Amount.

Rule. Find in Table III. the amount of £1 per annum, at the rate and for the time given, which multiply by the annuity.

Ex. Required the amount of an annuity of £50 for 21 years, reckoning interest at 5 per cent. per annum.

35·71925 × 50 = 1785·9625, or £1785, 19s. 3d.

Case 6. Annuity, Rate, and Time given, to find the Principal or Present Value.

Rule. Find in Table IV. the present value of £1 per annum, at the rate and for the time given, which multiply by the annuity.

Ex. Required the present value of an annuity of £1000 for 20 years at the rate of five per cent. per annum.

12·46221 × 1000 = 12462·21, or £12,462, 4s. 2d.

Case 7. Principal, Rate, and Time given, to find the annuity.

Rule. Find in Table IV. the present value of an annuity of £1 at the rate and for the time given, and divide the given principal thereby; the quotient will be the annuity required.

Ex. A gentleman is willing to sink £523 for an annuity to be paid yearly for 15 years. What annuity ought he to receive, reckoning interest at 5 per cent. per annum?

523 ÷ 10·3796 = 50·387, or £50, 7s. 9d.

If the question had been, what annuity to continue 15 years will pay off a debt of £523, computing interest at 5 per cent., the answer would have been the same.

Case 8. Principal or Present Value, Annuity, and Rate given, to find the Time.

Rule. Divide the principal by the annuity, and the quotient will be the present value of an annuity of £1 at the given rate; which quotient will be found in Table IV., under that rate and contiguous to the time required.

Ex. A sum of £523 is given for an annuity of £50, 7s. 9d., interest at 5 per cent. per annum. Required the duration of the annuity.

523 ÷ 50·387 = 10·3796; which, under 5 per cent. in Table IV., is found contiguous to 15 years.

If the question had been, In what time will an annuity of £50, 7s. 9d. pay off a debt of £523, computing interest at 5 per cent. per annum, the answer would have been the same.

Case 9. Principal or Present Value, Annuity, and Time given, to find the Rate.

Rule. Divide the principal by the annuity, and the quotient will be the present value of an annuity of £1 for the given time; which quotient will be found contiguous to the said time in Table IV., under the rate required.

Ex. An annuity of £100 for 15 years is sold for £1037, 19s. 4d., required the rate of interest per annum allowed to the purchaser.

1037·9666 ÷ 100 = 10·37966; which in Table IV., contiguous to 15 years, is found under 5 per cent.

Case 10. Annuity, Rate, and Amount given, to find the Time.

Rule. Divide the amount by the annuity, and the quotient will be the amount of £1 per annum at the given rate; which will be found in Table III. under that rate, and contiguous to the time required.

Ex. In what time will an annuity of £50, 7s. 9d. amount to £1087, 5s. 7d. at 5 per cent. per annum?

1087·2794 ÷ 50·3870 = 21·5785; which, in Table III., is found under the said rate, and contiguous to 15 years.

Case 11. Annuity, Time, and Amount given, to find the Rate.

Rule. Divide the amount by the annuity, and the quotient will be the amount of £1 per annum for the given time; which quotient will be found in Table III. contiguous to the said time, and under the rate required.

Ex. At what rate per cent. per annum will an annuity of £50, 7s. 9d. amount to £1087, 5s. 7d. in 15 years?

1087·2794 ÷ 50·3870 = 21·5785; which is found in Table III. contiguous to 15 years, and under 5 per cent.

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* These methods of approximating to the time and the rate are of general application to the succeeding Cases.

Case 12. Amount, Rate, and Time given, to find the Annuity.

Rule. Find in Table III., under the rate, the amount of an annuity of £1, in the given time; divide the given amount thereby, and the quotient will be the annuity required.

Ex. Required, the annuity which will amount in 15 years to £1087, 5s. 7d., at 5 per cent. per annum.

1087·2785 ÷ 21·5785 = 50·387 or £50, 7s. 9d.

III. PERPETUAL ANNUITIES.

When an annuity continues payable without termination, it is called a perpetual annuity, or perpetuity. Of the five quantities considered under the last head, two, namely, the amount and the time, fall necessarily to be discarded, as in perpetual annuities they become infinite, and consequently unassignable. The three quantities remaining to be noticed are, 1. The annuity; 2. The rate of interest; and 3. The present value of the annuity, or the principal, which, being immediately laid out, will yield annually and perpetually a sum equal to the annuity.

The simple interest of any sum for a year being what may be produced annually by that sum, without increasing or diminishing it, must be evidently equal to the perpetual annuity of which such sum will be the present value. And as while the rate continues the same the annual interests produced by any two sums are to each other as the principals which produced them, it follows that at 5 per cent. 5 : 1 : : 100 : 100 ÷ 5 = 20; therefore, when the rate is 5 per cent., the value of the perpetual annuity is 20 years' purchase. In the same manner, when interest is at 4 per cent., 4 : 1 : : 100 : 100 ÷ 4 = 25; and the perpetual annuity is worth 25 years' purchase. And it follows, that in every case the value of a perpetual annuity may be found by dividing any sum by its interest for one year. This being premised, the solution of the three following cases becomes nearly self-evident.

Case 13. Annuity and Rate given, to find the Principal or Present Value.

Rule. Divide the annuity by the rate, and the quotient will be the principal or present value required.

Ex. Required the value of an estate of which the yearly rent is £1500; reckoning interest at 3 per cent. per annum.

1500 ÷ ·03 = £50,000.

Case 14. Principal or Present Value and Rate given, to find the Annuity.

Rule. Multiply the present value by the rate, and the product will be the annuity.

Ex. A gentleman purchases an estate for £14,000; at what yearly rent must he let it in order to have 4 per cent. per annum upon the price?

14000 × ·04 = £560.

Case 15. Principal or Present Value and Annuity given, to find the Rate.

Rule. Divide the annuity by the present value.

Ex. An estate which cost £5000 is let for £150 per annum; what rate of interest has the purchaser on the price.

150 ÷ 5000 = ·03, or 3 per cent.

When, as is assumed throughout the present article, the interest is convertible into principal at the same terms as the annuity is payable, no difference arises in the valuation of perpetual annuities from the circumstance of the instalments being payable twice a-year, as the annuity divided by the rate of interest for one year must always produce the same quotient as half the annuity divided by half the annual rate of interest.

IV. DEFERRED OR REVERSIONARY ANNUITIES.

An annuity is said to be deferred when it is not entered upon immediately, but at the expiration of a certain time. Deferred annuities may be either terminable or perpetual. The chief cases are the following:—

1. *Deferred Terminable Annuities.*

Case 16. Annuity, Rate, Time deferred, and Time of payment given, to find the Principal or Present Value.

Rule. Find in Table IV., under the given rate, the present value of £1 per annum, first for the time deferred, and then for the time deferred and time of payment added together; subtract the former from the latter; then multiply the remainder by the given annuity, and the product is the principal required.

Ex. What sum should now be given for the reversion of a lease or annuity of £35 per annum, for 14 years after the next 7 years, in order that the purchaser may make 5 per cent. per annum of his money.

12·82115 — 5·78637 = 7·03478, which, multiplied by 35, produces £246, 4s. 4d.

Case 17. Principal, Rate, Time deferred, and Time of payment given, to find the Annuity.

Rule. Find by Case 1 what the principal will amount to in the time deferred; then find by Case 7 what annuity that amount will purchase.

Ex. If the reversion of an estate for 14 years after the next 7 years cost £246, 4s. 4d., what rent ought it to produce in order that the purchaser may make 5 per cent. per annum of his money?

By Case 1 £246·216 amounts in 7 years, at 5 per cent., to £346·452; equivalent by Case 7 to a rent for 14 years of £35.

Case 18. Principal, Annuity, Rate, and Time deferred given, to find the Term of Payment.

Rule. Find by Case 1 the amount of the principal at the given rate, at the expiry of the time deferred; then divide this amount by the given annuity, and the quotient will be the value of an annuity of £1 for the time of payment; which last will be found as in Case 8.

Ex. A debt of £816, 18s. 9d. is proposed to be paid off by assigning an annuity of £175 per annum, deferred for 9 years; how many years must the creditor enjoy such annuity in order to have his debt paid, with interest, at the rate of 6 per cent. per annum?

816·937 will, at 6 per cent., amount, at the end of 9 years, to 1380·198; and 1380·198 ÷ 175 = 7·886; which in Table IV., under 6 per cent., will be found contiguous to 11 years.

2. *Deferred Perpetual Annuities.*

Case 19. Annuity, Time deferred, and Rate given, to find the Present Value.

Rule. The excess of the present value of a perpetual annuity of £1 at the given rate (Case 13), above the present value of an annuity of £1 at the same rate, for the time deferred (Case 6), gives the present value of the reversion of a perpetual annuity of £1 after the time deferred; and this, multiplied by the given annuity, will produce the principal required.

Ex. What sum ought to be paid for the reversion, after 40 years, of an estate in perpetuity, of which the yearly rent is £70, reckoning interest at 4 per cent. per annum.

25 — 19·79277 = 5·20723; which, multiplied by 70, gives £364, 10s. 1½d.

V. RENEWAL OF LEASES.

Leaseholds and various other descriptions of property, when their annual income is susceptible of ascertainment, or of being reduced to a valuation, may be assimilated in all respects to annuities. In England, many societies, corporations, and colleges grant their leases for certain periods, the most usual of which are for 10, 20, 21, and 40 years; and it is customary for them to renew any number of years lapsed in such leases, on payment of a sum, as *fine*, which is agreed upon by the parties, the yearly rent or quit-rent remaining the same.

Case 20. Required, the Fine payable for renewing any number of Years in a Lease.

Rule. From the present value of an annuity to continue from the present time until the expiration of the renewed term, subtract the present value of an annuity to expire with the original term of the lease.

Ex. Thirty years having expired in a lease for 40 years, required the fine for renewing 10 years of the same, supposing the yearly rental £60, and the rate of interest 5 per cent.

By Table IV. the value of £1 per annum for 20 years, the number until the expiration of the renewed term, is 12·4622, and for 10 years, the unexpired time, it is 7·7217; and 12·4622 — 7·7217 = 4·7405; which last, multiplied by 60, gives 284·430, or £284, 8s. 7d.

VI. PRINCIPAL SUMS INCREASED YEARLY BY A CONSTANT QUANTITY.

Case 21. Principal, Rate, Time, and Yearly Increase given, to find the Amount.

Rule. Add the amount of the principal accumulated, at the rate and for the time given (Case 1), to the amount of the yearly increase accumulated in the same way (Case 5), and the sum will be the total amount required.

Case 22. Principal, Rate, Time, and Amount given, to find the Yearly Increase.

Rule. From the given amount subtract the amount of the principal at the rate and for the time given (Case 1), and the remainder will be the amount of the yearly increase for the given time; then divide this latter sum by the amount of an annuity of £1 for the given time as shown in Table III., and the quotient will be the yearly increase required.

VII. PRINCIPAL SUMS DIMINISHED YEARLY BY A CONSTANT QUANTITY.

Case 23. Principal, Rate, Time, and Yearly Decrease given, required the Amount which will remain unextinguished at the end of the given Time.

Rule. From the amount of the principal, corresponding to the given rate and time (Case 1), subtract the amount of the yearly decrease or annuity accumulated in the same manner (Case 5), and the remainder will be the unextinguished amount required.

Case 24. Principal, Rate, Time, and Amount unextinguished at the end of the Time given, required the Yearly Decrease.

Rule. From the amount of the principal, at the rate and for the time given (Case 1), subtract the amount unextinguished, and the remainder will be the amount, corresponding to the termly decrease; which latter being divided by the amount of an annuity of £1 at the end of the given number of years, as shown in Table III., will give the termly decrease required.

N. B. The ordinary questions in relation to *Sinking Funds* may be solved by the two preceding Cases, and Cases 7 and 8.*

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* The preceding rules and the accompanying tables furnish the means of solving the cases which most commonly occur in practice; but as computations must occasionally be made, not only at other rates than 3, 4, 5, and 6 per cent. per annum,—those to which our tables are confined,—but likewise upon the supposition of the interest, as well as the annuity, being payable half-yearly, or at other terms, we here subjoin formulæ which will enable any one acquainted with the elements of analysis to solve, with the aid of a table of logarithms, nearly all cases which can present themselves, except, as afterwards explained, those where the rate is the quantity sought.

Let p denote the *principal* or *present value*, and m the *amount*, in the sense in which those terms are used on page 406. Also let a signify the *annuity*, or one of the equal sums successively payable at the expiration of equidistant periods, whether yearly or half-yearly, &c.; n the *number* of those equidistant *periods of time*; and r the *rate*, or ratio of the interest in one period to the principal, and which is equal in all cases to the interest of £1 for one period of time.

1. Principal Sums.

$$m = p\,(1+r)^n$$

2. Terminable Annuities.

$$m = a\frac{(1+r)^n - 1}{r}$$

$$p = a\frac{(1+r)^n - 1}{r\,(1+r)^n}$$

3. Perpetual Annuities.

$$p = \frac{a}{r}$$

4. Deferred Annuities.

Let d signify the deferred time, or the number of periods which elapse before the annuity is *entered upon*; n the number of periods during which it is paid; and the other symbols as before.

Deferred Terminable Annuities.

$$p = a\frac{(1+r)^n - 1}{r\,(1+r)^{d+n}}$$

Deferred Perpetuities.

$$p = \frac{a}{r\,(1+r)^d}$$

5. Principal Sums increased or diminished at each equal Interval of Time by a constant Quantity.

Let a denote this quantity, the other symbols being as at first.

When Principal increased.

$$m = p\,(1+r)^n + a\frac{(1+r)^n - 1}{r}$$

When Principal diminished.

$$m = p\,(1+r)^n - a\frac{(1+r)^n - 1}{r}$$

EXTENSIONS OF THE PRECEDING FORMULÆ.

Hitherto we have supposed the annuity and interest to be due at the same periods; but as these conditions have no necessary relation to each other, we shall now exhibit those alterations of the formulæ which take place when the interest is convertible into principal at shorter periods than those at which the annuity is payable, and *vice versa*.

Here let r denote the rate, or interest of £1 for one year; a the annuity nominally payable at the end of each year; n the number of years; and m the amount, and p the principal or present value as before; these symbols all bearing now the significations attached to them in the text on page 406. Also let i denote the number of equal intervals in each year in which the interest is convertible into principal; and s the number of equal instalments of the annuity in each year.

CASE I. When the interest is convertible into principal a certain number of times in each interval between the instalments of the annuity;—$\frac{i}{s}$ being hence a whole number.

Terminable Annuities.

$$m = \frac{a}{s} \times \frac{\left(1+\frac{r}{i}\right)^{in} - 1}{\left(1+\frac{r}{i}\right)^{\frac{i}{s}} - 1}$$

II. Annuities on Lives.

Under this head may be classed not only annuities on lives, properly so called, but every beneficial interest which terminates with the lives of any one or more individuals, including salaries, and all that in law comes under the denomination of a *life estate*. It comprehends, likewise, *Reversions*, or the interest which the next proprietor has in any estate after the death of the present; and *Assurances*, in which the question is, what annuity must A pay to B during his life, in order that B may pay a given sum to A's representatives at his death.

Tables of Mortality.—The basis of all questions having reference to the failure or continuance of life must obviously be the law of human mortality. Tables of mortality are those which exhibit this law through the whole extent of life, by showing how many persons out of a certain number, as 10,000 born alive, die in each year, and consequently how many complete each year of their age. The first table of this kind was constructed by Dr Hawley, from observations at Breslau in Silesia, and published in 1693. Similar tables were afterwards published both in this country and on the Continent, of which there may be noticed Kerseboom's, printed in 1738, from Registers of State Annuitants in Holland; Thomas Simpson's, in 1742, founded on the London bills of mortality; De Parcieux's in 1746, from lists of nominees in the French tontines of 1689 and 1696; Dupre de St Maur's in 1749, from French parish registers. In 1769, Dr Price published his work on Reversionary Payments, in which were given tables constructed from observations in London, Norwich, and Northampton. In the 4th edition of Dr Price's work (1783) the Northampton Table was extended and improved: at the same time various other tables were furnished; in particular the Chester Table, lately republished in a corrected form by the Society for the Diffusion of Useful Knowledge in their work on Probability; and a table for the kingdom of Sweden, in which the sexes were distinguished, and the law of mortality determined for the bulk of the people. In 1815, Mr Milne, the eminent actuary of the Sun Office, published his treatise on the valuation of Annuities and Assurances, in which were given new tables deduced from the Swedish registers, and from observations at Carlisle and Montpellier. Since then, Mr Davies and Mr Babbage have put forth tables deduced from the experience of the Equitable Assurance Society; and the Parliamentary Reports on Friendly Societies in 1825 and 1827, and the return made to the Treasury in 1829 by Mr Finlaison, the government actuary, contains a variety of information concerning the rate of mortality among the nominees of the government tontines and annuities. Lastly, Mr Ansell, in his work (1835) on Friendly Societies, has, from an extensive collection of returns made to him, deduced the law of mortality which generally prevails among the members of these institutions. Of the tables now noticed, De Parcieux's, the corrected Chester Table, the Swedish Table of 1776-1795, and the table founded on the experience of the Equitable Society, are esteemed of high authority; but in practical importance they are inferior to the Northampton, Carlisle, and Government Tables, which, from their serving as the

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$$p = \frac{a}{s} \times \frac{1-\left(1+\frac{r}{i}\right)^{-in}}{\left(1+\frac{r}{i}\right)^{\frac{i}{s}}-1}$$

Perpetual Annuities.

$$p = \frac{\frac{a}{s}}{\left(1+\frac{r}{i}\right)^{\frac{i}{s}}-1}$$

Case II. When the instalments of the annuity are payable a certain number of times in each interval between the conversion of interest into principal; $\frac{s}{i}$ being hence a whole number.

Terminable Annuities.

$$m = a\left\{\frac{1}{r}+\frac{\left(\frac{s}{i}-1\right)}{2s}\right\}\cdot\left\{\left(1+\frac{r}{i}\right)^{in}-1\right\}$$

$$p = a\left\{\frac{1}{r}+\frac{\left(\frac{s}{i}-1\right)}{2s}\right\}\cdot\left\{1-\left(1+\frac{r}{i}\right)^{-in}\right\}$$

Perpetual Annuities.

$$p = a\left(\frac{1}{r}+\frac{\frac{s}{i}-1}{2s}\right)$$

Formulæ for deferred annuities, affected by similar conditions, may be readily obtained from the preceding, by deducting an annuity for the period deferred from one for the period deferred and in possession.

Demonstrations of all these formulæ will be found in the "Treatise on the Valuation of Annuities and Assurances," by Mr Milne, and the "Doctrine of Compound Interest," by Mr Francis Corbaux. We have deemed it unnecessary to give more than one formula for each class of cases, as the others may be easily deduced from the given equation, by transposition, except in the case where the *rate* is the quantity sought. In this case the formula becomes so exceedingly complex, that recourse is generally had to approximate methods from tables in the manner explained in the text. The tables best adapted for this purpose are those appended to Mr Corbaux's work, where the values are exhibited for each quarter per cent., from 3 to 6 per cent., on the several suppositions of interest being improvable yearly, half-yearly, and quarterly.

basis of almost all the annuity and assurance business in this country, are deserving of particular attention.

The *Northampton Tables*, formed by Dr Price from the registers of mortality kept at Northampton for 46 years from 1735 to 1780, were long the only ones in use, but they are now in much less repute. The observations embrace a considerable number of deaths, but no enumerations of the people were made to show how far the population was increasing, decreasing, or stationary (without which Mr Milne has proved that no correct tables of mortality can be constructed), while, on the other hand, no fixed rule appears to have been followed in interpolating the numbers dying annually from those given for decennial periods by the registers. In the report of the House of Commons on Friendly Societies in 1827, it is stated, upon the evidence of several of the most distinguished actuaries in the kingdom, "that these tables were originally formed in a degree upon hypothetical data," that "in truth there is not even a *prima facie* case in their favour," and that "the evidence appears to your committee to be strong and decisive in favour of the use of tables which give an expectation of life higher than the Northampton." Nevertheless, the Northampton Tables continue to be of high commercial importance, as they form the basis of the calculations of nearly all the life assurance societies instituted prior to 1815, and of many of those established subsequently. It may also be observed that the low value given by the Northampton Tables applies chiefly to ages under 60. Above 60, they are represented by that table nearly if not quite as good as by many other observations.

The *Carlisle Tables*, formed by Mr Milne from observations made by Dr Heysham in two parishes in Carlisle, from 1779 to 1787, give a higher expectation of life than the Northampton Tables. From the description of them, it appears that classified enumerations of the population were made at the commencement and termination of the observations, while the deaths in the intervening period were carefully recorded according to a similar classification; and that the number of persons living in the parishes at the end of the observations was 8677, the number who died in the 9 years, 1840; thus making the number the observations were made upon 10,517, exclusive of those who emigrated. Owing to the accurate construction of these tables, they have deservedly attained a very high celebrity. The Commons' report already alluded to describes them as "more complete than any which had previously existed in England; and the tables are, therefore, strongly recommended." It has been objected that the number of deaths, 1840, is too small to admit of subdivision; but the confirmation which the tables have derived from a comparison with other tables of reputation, has led practical men to disregard this circumstance, except for extreme old age, where it appears to have led to some incongruities. Mr Milne also considers them objectionable for ages below 10, in consequence of the introduction of vaccination since the observations were made. They are nevertheless supposed to contain at this time the best information we possess both on old and young lives belonging to the middle and higher classes. Since the publication of the Carlisle tables in 1815, they have, with certain modifications, been adopted by several assurance companies of the highest character, such as the Sun and Alliance, and have otherwise been the basis of very extensive calculations of value.

The *Government Annuity Tables* were prepared by Mr Finlaison, the actuary of the National Debt Office, betwixt 1825 and 1829, from observations of the mortality among the nominees of the tontines and other annuities granted by government. Owing to these nominees having been selected individuals, they give rather a higher expectation of life than the Carlisle tables. They are chiefly remarkable, however, for their distinguishing the sexes, and for the much higher value which they give to female than to male lives. The greater duration of female lives had been previously shown by the Chester, Swedish, and other tables; but Mr Finlaison's tables give the value of female lives so much higher than the others, that it is difficult to avoid the conclusion that some peculiar reason has existed for this disproportion. They now form the basis of the value of the government life annuities.

Probabilities and Expectation of Life, &c.—These, in so far as necessary for the purposes of the present article, may be readily obtained from tables of mortality by the following rules in the doctrine of probabilities:—

1. The probability of any event happening is measured by a fraction, whose numerator is the number of ways in which it can happen, and whose denominator is the number of ways in which it can either happen or fail. Thus, if there be 3 chances for the happening of an event, and 1 chance for its not happening, then will the probability of the event happening be measured by the fraction $\frac{3}{4}$.

2. The probability of the happening of several events that are independent of each other is equal to the product of the probabilities of the happening of each event considered separately. Thus, if the probability of the happening of 2 independent events be $\frac{1}{2}$ and $\frac{3}{4}$ respectively, then will $\frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$ measure the probability of the happening of both these events.

Applying these rules to the Carlisle Table of Mortality, we find that as at the age 30 the number of persons alive of 10,000 born is 5642, while at 40 this number is reduced to 5075, the probability of a person aged 30 surviving 10 years will be measured by the fraction $\frac{5075}{5642}$. In the same way, the probability of a person aged 25 surviving 10 years, will be $\frac{5362}{5879}$. Again, the probability that 2 persons, of the ages 30 and 25, shall jointly survive 10 years, will be $\frac{5075}{5642} \times \frac{5362}{5879}$.

The average of forthcoming years, or what is improperly called by writers the *expectation of life*, is the number of years which, taking lives of the same age one with another, any one of these lives may be considered as sure of enjoying; those who live beyond that period enjoying as much more in proportion to their number as those who fall short of it enjoy less. Consequently, the rule for finding it will be as follows :—Divide the sum of all the living at every age after the age of the given life by the number of persons living at that age : half unity added to the quotient will be the value required. Half unity is added, as the number of persons taken at the given age who have not lived out one year may be considered as having averaged one-half of a year's existence. The expectation of life at 90, by the Northampton Table, will be thus found :—The numbers living at each age above 90, added together, give $34 + 24 + 16 + 9 + 4 + 1 = 88$: the number living at 90 is 46, and the former divided by the latter gives 1·91, to which adding half unity = ·50, we have 2·41 for the expectation of life at 90.

The expectation of life is therefore different from the *term of probable life*, as the latter must obviously be the term within which a stated number of persons of a given age should be reduced to exactly one-half of the same number. Thus, according to the Carlisle Table, the expectation of life at birth is 38·72 years ; while the term of probable life is about 41 years.

The following table shows the expectation of life at different ages, deduced from the Northampton, Chester, Carlisle, and Government Tables ; Mr Davies' Table, founded on the experience of the Equitable Society, Mr Milne's Table for the whole population of Sweden, from 1776 to 1795, and De Parcieux's Table, founded on the French tontines :—

Age.	Carlisle.	North-ampton.	Equi-table.	Depar-cieux.	Sweden.	Government.		Chester.	
						Males.	Females.	Males.	Females.
0	38·72	25·18	....	....	36·12	50·16	55·51	34·46	39·44
5	51·25	40·84	....	48·25	47·92	48·93	54·23	46·45	50·57
10	48·82	39·78	48·83	46·83	46·16	45·57	51·05	44·47	47·82
20	41·46	33·43	41·06	40·25	38·96	38·39	43·99	37·30	40·49
30	34·34	28·27	33·98	34·08	32·12	33·17	37·57	31·30	34·22
40	27·61	23·08	27·40	27·50	25·45	27·02	31·12	24·82	27·96
50	21·11	17·99	20·83	20·42	19·03	20·30	24·35	19·32	21·92
60	14·34	13·21	15·06	14·25	12·85	14·39	17·32	13·96	15·40
70	9·18	8·60	9·84	8·67	8·01	9·22	10·99	9·63	9·98
80	5·51	4·75	5·38	4·67	4·85	4·94	6·50	7·10	6·60
90	3·28	2·41	2·65	1·75	3·03	1·95	2·83	4·32	5·01

Valuation of Life Annuities, &c.—The probabilities of life are, in these operations, combined with the interest of money. [INTEREST.] If a person has 9 chances in 10 to obtain possession of £100 at the expiry of a year, the present value of his expectation (disregarding interest) is the product of 100 by the fraction $\frac{9}{10}$ or £90 ; but, assuming interest at 5 per cent., it is obvious, as the £90 is not due until the expiry of a year, that, in order to show its present value, it must be still farther reduced by one year's interest or rather discount on that sum. Similarly, if a person aged 30 is to acquire right to £1000 in the event of his attaining the age of 40, the present value of his expectation will be obtained by multiplying the £1000 by the probability of his attaining that age, and then discounting the product for 10 years ; the latter operation being, as already shown (Case 2), performed by multiplying the said product by the present value of £1 due at the end of 10 years. Thus, in the case supposed, assuming interest at 5 per cent., and the probabilities of life as at Carlisle, we shall have $1000 \times \frac{5075}{5642} \times {\cdot}613913 = 552{\cdot}216$, or £552, 4s. 4d., the present value required. In this way *Endowments* (Case 43) *or Assurances on Survivorship of Time* are calculated.

The value of life annuities may be obtained in the same manner, by finding the present value of each year's rent as it becomes due from the given age to the oldest in the table of mortality, and the sum of all these will be the total present value of the annuity ; but in finding the value of annuities on a number of lives of several successive ages, the process is considerably abridged by deducing the value of an annuity on the next younger life from the value of an annuity on a life one year older, as follows :—

Rule.—" Begin with the oldest life in the table of observations ; add unity to the value of an annuity on that life (usually equal to 0), and multiply the sum by the expectation of a life one year younger, receiving £1 at the end of a year ; the product will be the value of an annuity on the life one year younger : this value being substituted for the value of an annuity on the oldest life, and the process repeated, will give the value of an annuity on the next younger life, and so on till we come to the age of the given life."—(*Baily on Life Annuities*, p. 31.)

The value of annuities, as shown by the tables, is computed by this rule.* The following is the procedure in the case of the Carlisle Table for single lives, assuming the annuity to be £1, and interest at 5 per cent. per annum.

The oldest life in the Carlisle Table is 104, the value of an annuity on which being evidently equal to 0, we proceed thus:—

Ages.	Annuity + 1.		Probability.		£1 discounted for 1 Year.		Value of Annuity.
103	(1 + 0)	×	$\frac{1}{3}$	×	·9524	=	0·317
102	1·317	×	$\frac{3}{5}$	×	·9524	=	0·753
101	1·753	×	$\frac{5}{7}$	×	·9524	=	1·192
100	2·192	×	$\frac{7}{9}$	×	·9524	=	1·624
99	2·624	×	$\frac{9}{11}$	×	·9524	=	2·045
98	3·045	×	$\frac{11}{14}$	×	·9524	=	2·278

and so on till we come to the youngest age,—the operation being facilitated by the use of logarithms. The same procedure is followed in computing the values for joint lives. Thus assuming the Carlisle Table with interest at 5 per cent. as before, and the difference of age betwixt the two lives to be 5 years, we shall have

Ages.	Annuity + 1.		Probabilities.		£1 discounted for 1 year.		Value of Annuity.
103 & 98	(1 + 0)	×	$\frac{1 \times 11}{3 \times 14}$	×	·9524	=	0·249
102 & 97	1·249	×	$\frac{3 \times 14}{5 \times 18}$	×	·9524	=	0·555
101 & 96	1·555	×	$\frac{5 \times 18}{7 \times 23}$	×	·9524	=	0·828

and so on throughout. In this way tables have been formed of the value of annuities on single lives at all ages and at the common rates of interest; and also on two joint lives: but cases which involve three lives are, in practice, solved by methods of approximation from the tables for two lives; as the variety of combinations which three lives admit would render the tables of very great length. Their construction is, however, in principle the same as the tables for two lives.

At the close of this article tables are given for single lives founded on the Northampton observations, and for the various rates of 3, 4, 5, and 6 per cent. interest; and by the kind permission of Mr Milne, similar tables are given, founded on the Carlisle observations, along with tables for joint lives. The tables for single lives include all ages, and those for joint lives all the usual combinations betwixt the ages 15 and 75. By means of these tables, nearly all the cases which occur in practice may be solved with facility.

Annuities Payable Half-Yearly, &c.—The values shown in the tables are computed on the supposition that the annuities are all payable yearly, and at the end of each year; but if they be payable more frequently, their value will be increased. A person who receives a life annuity half-yearly, besides gaining one half-year's interest on every moiety of his annuity, may live to receive a half-year's annuity more than the person who receives an annuity once in and at the end of each year. For similar reasons, an annuity payable quarterly will be of greater value than that which is payable half-yearly. But however frequently the annuity may be payable, it has been found that its increase of value on this account cannot exceed half-a-year's purchase, which is the extent to which it is increased in the hypothetical case of the instalments being payable momently. Where the annuities are payable half-yearly, the common practical rule is to add ¼ of a year's purchase to their tabular value; and when they are payable quarterly, to add ⅜ of a year's purchase; or expressing the same decimally, add to the tabular value of the yearly annuity, if it be payable half-yearly, ·250; quarterly, ·375;—also, if payable monthly, ·458; weekly, ·490; daily, ·499; and in the hypothetical case of their being payable momently, ·500. (*Milne*, p. 273. *Ansell on Friendly Societies*, p. 80.)

Practical Solution of Cases.—With these prefatory explanations, we shall now proceed to show the mode of solving by the tables the cases which usually occur in practice.

I. ANNUITIES ON SINGLE LIVES.

Case 25. To find the Value of an Annuity on the Life of a Person of a given Age.

Rule. Multiply the sum by the value of £1 annuity on the assigned life.

Ex. Required the value of an annuity of £50 on the life of a person aged 45; Carlisle Table, interest 4 per cent.

The value of an annuity of £1 on a life aged 45 is, by the Carlisle Table, 14·104, which, multiplied by 50, gives 705·2, or £705, 4s., the value required.

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* Life contingencies are now sometimes computed by the method invented by Mr Barrett and improved by Mr Griffith Davies, an account of which is given by M. De Morgan in the Companions to the Almanac for 1840 and 1842. See also Jones on Annuities.

Case 26. To find the Annuity which any given Sum will purchase during the Life of a Person of a given Age.

Rule. Divide the given sum by the value of an annuity of £1 on the assigned life.

Ex. What annuity may be purchased for £705, 4s. on a life aged 45; Carlisle Table, interest 4 per cent.

£705·2 ÷ 14·104 = £50.

Case 27. To find the Value of an Annuity Deferred for any given Number of Years.

Rule. Find the value of an annuity on a life older by the deferred term than the proposed life, which multiply by the present value of £1 payable at the end of the said term, and also by the probability that the life shall continue so long; the product will give the result required.

Ex. A person aged 35 wishes to purchase an annuity for £50, for what may happen to remain of his life after 45; required the present value thereof; Carlisle Table, 4 per cent.

The value of an annuity of £50 at 45 is, by Case 25, £705, 2s.; the present value of £1 to be received at the end of 10 years is ·675564; also the probability that a life aged 35 will continue 10 years is 4727 ÷ 5362 = ·881574: And 705·2 × ·675564 × ·881574 = 419·989, or £419, 19s. 9d.

Case 28. To find the Value of a Temporary Annuity.

Rule. Find by Case 27 the value of an annuity deferred for the proposed term; which subtract from the value of an annuity on a life of the given age; the difference will be the value required.

Ex. Required the value of an annuity of £50 for 10 years on a life aged 35; Carlisle Table, 4 per cent.

The value of an annuity of £50 on a life aged 35, deferred for 10 years is, by Case 27, 419·989; the value of an annuity of £50 on the said life is 50 × 16·041, or 802·050; and 802·050 — 419·989 = 382·061, or £382, 1s. 3d.

II. Annuities on Two Lives.

Case 29. To find the Value of an Annuity on the Joint Continuance of Two Lives; that is for as long as they both continue alive together.

Rule. Multiply the sum by the value of £1 annuity on the two assigned lives.

Ex. Required the value of an annuity of £90 on the joint continuance of two lives, ages 40 and 60; Carlisle Table, 5 per cent.

Value at ages 40 and 60 by Table IX., is 7·961; and 7·961 × 90 = 716·49, or £716, 9s. 10d.

The tables of annuities on joint lives give their values only where the ages are equal, or their difference 5 years or any multiple of 5; but when the combination of ages of two proposed lives is not contained in these tables, the value of an annuity on their joint continuance may be determined according to the following rule, which is applicable to all cases where neither of the lives is under 12 years of age.

"Extract from the tables the values of annuities on the joint continuance of the oldest of the proposed lives, and two others separately, which are younger than that oldest life by the multiples of 5, next greater and next less respectively than the difference of age between the proposed lives. That one of four arithmetical mean proportionals between these two values which corresponds with the proposed combination of ages will be nearly the value sought."—(*Milne on Annuities and Assurances*, p. 290.)

Ex. Required the present value of an annuity of £90 on two joint lives aged 27 and 46; Carlisle Table, 4 per cent.

The value corresponding to the ages 26 and 46 is 12·325, and that to 31 and 46 is 12·093; difference ·232, the fifth part of which, ·0464, being continually deducted from the former of these two values, gives the four arithmetical means which are the values of annuities on the corresponding combinations of lives omitted in the tables. Hence, as 27 and 46 is the combination of ages next in order to 26 and 46, we shall have 12·325 — ·0464 = 12·2786, the value corresponding to the combination 27 and 46; and 12·2786 × 90 = 1105·074, or £1105, 1s. 6d., the value required.

The result would obviously have been the same had 4 times the common difference, ·0464, or ·1856, been added to the value corresponding to the ages 31 and 46. Thus 12·093 + ·1856 = 12·2786, as before.

Case 30. To find the Value of an Annuity on the Longest of Two Lives, that is, for as long as either of them continues alive.

Rule. From the sum of the values of annuities on the two single lives subtract the value of an annuity on the two joint lives, and the remainder will be the result required.

Ex. Required the value of an annuity of £60 on the longest of two lives aged 30 and 60; Carlisle Table, 4 per cent.

By Table VII., the value of a life aged 30 is 16·852, and of 60, 9·663; and the sum of these, 26·515; from which subtract the value of the lives 30 and 60 by Table IX., 8·820, and the remainder, 17·695, multiplied by 60, gives 1061·7, or £1061, 14s.

III. Annuities on Three Lives.

Case 31. To find the Value of an Annuity on the Joint Continuance of Three Lives.

Rule. Take the value of the joint lives of the two oldest lives by Case 29, and find in the table for single lives the age of a single life equal, or the most nearly equal, to that value: then find the value of the joint lives of the youngest and that now found; the result will give the common approximation to the value required.

Ex. Required the value of an annuity of £100 on three joint lives, aged 15, 20, and 25 years respectively; Carlisle Table, 5 per cent.

The value of the joint lives, 20 and 25, is, by Table IX., 13·398, which, in Table VII. corresponds most nearly with a single life aged 40; and the value of the joint lives, 15 and 40, being by Table IX. 12·201, we have 12·201 × 100 = 1220·1, or £1220, 2s.

Case 32. To find the Value of an Annuity on the Longest of Three Lives.

Rule. From the sum of the values of annuities on all the single lives subtract the sum of the values of annuities on each pair of joint lives, and to the remainder add the value of an annuity on the three joint lives as found by last Case. The result will give the value required.

Ex. Required the value of an annuity of £100 on the longest of three lives, aged 15, 20, and 25; Carlisle Table, 5 per cent.

By Table VII. the values of the single lives are for 15, 16·227; for 20, 15·817; for 25, 15·303; and their sum is 47·347. By Table IX. the values of the joint lives are, for 15 and 20, 13·959; for 15 and 25, 13·608; for 20 and 25, 13·398; and their sum 40·965. Also the value of the three joint lives is by preceding Case, 12·201. Hence we have 47·347 — 40·965 + 12·201 = 18·583, the value of annuity of £1 on the longest of the three lives, and 18·583 × 100 = £1858, 6s., the value required.

Case 33. To find the Value of an Annuity granted upon Three Lives on Condition of its ceasing as soon as any Two of them become Extinct.

Rule. From the sum of the values of annuities on each pair of joint lives, subtract twice the value of the three joint lives.

Ex. Let the annuity be £100, and the ages 15, 20, and 25 respectively; Carlisle Table, 5 per ct.

The value of each pair of joint lives is, by preceding Case, 40·965; that of the three joint lives is, by Case 31, 12·201; and 40·965 — (12·201 × 2) = 16·563; hence 16·563 × 100 = £1656, 6s., the value required.

IV. Reversionary or Survivorship Annuities.

Case 34. To find the Value of the Reversion of an Estate in Fee, or Perpetual Annuity, after the Death of a Person of a given Age, in a Single Payment.

Rule. Deduct the value of the assigned life from the perpetuity; then multiply the remainder by the rent or annuity.

Ex. Required the present value of the reversion of an estate of £500 a-year, after the death of a person aged 60; Carlisle Table, interest 6 per ct.

The value of a perpetuity at 6 per cent. is 16·667, and of an annuity on a life of 60, 8·304; then 16·667 — 8·304 = 8·363; and 8·363 × 500 = £4181, 10s.

Case 35. To find the Value of the Reversion of an Annuity on a Single Life after another, in a Single Payment.

Rule. From the value of the life in expectation, subtract the value of the two joint lives.

Ex. A person, aged 50, wishes to purchase an annuity of £100 to his wife, aged 45, after his death, provided she be the survivor; what is the present value thereof; Carlisle Table, 4 per ct.

By Table VII., the value corresponding to 45 is 14·104; from which deducting 10·591, the value corresponding to the lives 45, 50, by Table IX., there remains 3·513; and 3·513 × 100 = 351·3, or £351, 6s., the value required.

To find the value in annual payments: Divide the value in a single payment by the value of an annuity on the joint lives, plus unity. Hence in the above example the annual payment would be 351·3 ÷ 11·591 = 30·308, or £30, 6s. 2d.

Case 36. To find the Value of the Reversion of an Annuity on a Single Life A, after the Longest of Two Lives B and C, in a Single Payment.

Rule. From the sum of the values of an annuity on the single life A, and on the three joint lives, A, B, and C, subtract the sum of the values of an annuity on each pair of joint lives, A and B, and A and C.

A + ABC — (AB + AC).

Case 37. To find the Value of the Reversion of an Annuity on Two Joint Lives, A B, on the failure of a Single Life, C.

Rule. From the value of an annuity on the joint lives A B, subtract the value of an annuity on the three joint lives, A, B, and C.

AB — ABC.

Case 38. To find the Value of a Reversion of an Annuity on the Longest of Two Lives, A and B, after a Single Life, C.

Rule. From the sum of the values of annuities on the single lives in reversion A and B, and of an annuity on the three joint lives, subtract the sum of the values of an annuity on each pair of joint lives, A B, A C, and B C; the difference will give the value required.

A + B + ABC — (AB + AC + BC).

Case 39. To find the Value of the Reversion of an Annuity on a Single Life A, on the failure of the Joint Lives B and C.

Rule. From the value of an annuity on the life A, subtract the value of an annuity on the three joint lives, A, B, and C.

A — ABC.

V. Assurances on Single and Joint Lives, and on the Longest of Two Lives.

Case 40. To determine the present Value of a given Sum, payable on the Death of a person of an assigned Age, or to find how much must be paid annually by a person of an assigned age, that his heirs may receive a given sum on his decease.

Rule. Multiply the value of an annuity of £1 on the assigned life by the interest of £1 for one year, and subtract the product from unity; then, dividing the remainder by the amount of £1 for one year, the result will give the value of an assurance of £1; and this last multiplied by the given sum will produce the result required.

Ex. Required the present value of £1000, payable on the death of a person aged 47; Carlisle Table, 3 per cent.*

The value of £1 annuity on a life of 47 is here 15·294, which, multiplied by ·03, the interest of £1 for one year, gives ·45882; and this subtracted from unity leaves ·54118; then ·54118 ÷ 1·03 = ·52542, and ·52542 × 1000 = £525·42, or £525, 8s. 5d., as required.

To find the value in annual payments: Divide the value in a single payment, found as above, by the value of £1 annuity on the assigned life, plus unity.†

Hence, in the above example, we shall have 525·42 ÷ 16·294 = 32·246, or £32, 4s. 11d., the annual premium for an assurance of £1000 on a life of 47.

Case 41. To find the Value of a given Sum, payable on the Extinction of either of Two Lives.

Rule. Substitute the value of an annuity on the joint lives (Case 29), instead of the value of an annuity on a single life, and proceed as in Case 40.

Case 42. To find the Value of a given Sum, payable on the Extinction of the Longest of Two Lives.

Rule. Substitute the value of an annuity on the longest of two lives (Case 30), instead of the value of an annuity on a single life, and proceed as in Case 40.

VI. Endowments, or Assurances on Survivorship of Time.

Case 43. To find the present Value of a given Sum, payable at the End of a given number of Years, provided the Party assured survive that Period.

Rule. Multiply the present value of £1 discounted for the given number of years by the probability that the given life will continue that period; and the product, multiplied by the given sum, will give the value required.

Ex. Required the present value of £100, payable at the end of 10 years, provided a person, now aged 20, be then alive; Carlisle Table, 4 per cent.

The present value of £1 to be received at the end of 10 years is ·67556, and the probability that a person aged 20 will live that period, is 5642 ÷ 6090. Hence we have ·67556 × 5642 ÷ 6090 × 100 = 62·586, or £62, 11s. 9d.

To find the value in annual sums, payable at the commencement of each year: Divide the preceding result by the value of a temporary annuity, plus unity, for one year less than the given term.

VII. Deferred and Temporary Assurances, on Single Lives.

Case 44. To find the Value of a Deferred Assurance on a Single Life in one present Payment.

Rule. Find the value of an assurance on a life as many years older than the given life as are equal to the deferred term; which multiply by the probability of the assigned life attaining that period, and also by £1 discounted for the given number of years.

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* Many of the assurance offices have framed their tables on this basis, but always with an additional per centage, varying from about 10 to 25 per cent. on the computed amount of premium, to defray charges of management, and as a guaranty against contingencies. The addition of 25 per cent., which we observe has been adopted by several young offices, as the British and Colonial, the Commercial, and others, should yield a considerable surplus or profit.—See page 393.

† Unity is added because in life assurances the first annual premium is paid at the date of entry.

Ex. Required the value of £100, payable on the decease of a person aged 50, provided he survive 10 years; Carlisle Table, 3 per cent.

The value of an assurance of £100 on a life of 60 (50 + 10), Carlisle, 3 per cent. is (Case 40) 66·530; and as the probability of a life of 50 living to 60 is 3643 ÷ 4397, and £1 discounted for 10 years at 3 per cent. is by Table II. ·744094, we have 66·530 × (3643 ÷ 4397) × ·744094 = 41·010, or £41, 0s. 2d.

To find the value in annual payments during the deferred period: Divide the value in a single payment by unity added to the value of a temporary annuity on the life (Case 28) for one year less than the deferred period.

To find the value in annual payments during the whole life of the assured: Divide the value in a single payment by unity added to the value of £1 annuity on the given life.

Case 45. To find the Value of a Temporary Assurance of a given Sum on a Single Life in one present Payment.

Rule. From the value of an assurance on the whole life subtract the value of a deferred assurance for the given term.

Ex. Required the value in a single payment of a temporary assurance of £100 for 7 years, on the life of a person aged 24; Northampton Table, 3 per cent.

The value of an assurance of £100 on the whole life of a person aged 24, found by Case 40, is 44·710; from which, subtracting 35·047, the value of an assurance of £100 on the same life, deferred for 7 years, found by Case 44, leaves 9·663, or £9, 13s. 3d., as required.

To find the value in Annual Payments: Divide the value in a single payment by unity added to the value of a temporary annuity on the life for one year less than the given term.

VIII. Assurances on Single Lives by a definite Number of Payments.

Case 46. To find the Value of an Assurance of a given Sum on a Single Life by a definite Number of Payments.

Rule. Divide the value of an assurance on the whole life, in a single payment, by unity added to the value of a temporary annuity on the life for 1 year less than the given number of payments.

IX. Assurances on Survivorship of Lives.

Case 47. To find the present Value of a given Sum payable to B, on the Decease of A, provided B survive A.

To illustrate the rule, suppose A's age to be 32, and B's 24.

Rule. 1st Term. Find, by Case 41, the value of £1, payable on the decease of the joint lives 32 & 24.

2d. Find, by Case 29, the value of £1 annuity on the joint lives 33 and 24 (that is, taking A at one year older), to which add unity, and multiply the sum by the number living at 33; then divide the product by the amount of £1 in one year multiplied by the number living at 32, and the quotient will give the second term.

3d. Find, by Case 29, the value of £1 annuity on the joint lives 31 and 24 (that is, taking A at one year younger), and multiply this value by the number living at 31; then divide the product by the number living at 32, and the quotient will give the third term.

From the sum of the 1st and 3d terms subtract the 2d term, and the remainder, multiplied by half the given sum, will produce the value required.

To find the value in Annual Payments: Divide the value in a single payment, found as above, by the value of an annuity on the joint lives, plus unity.

Ex. Required the present value of £400, payable to B, aged 24, on the decease of A, aged 32, provided B be then alive; Carlisle Table, 5 per ct.

Proceeding as above directed, the first term will be found to be £·34962; the second £12·809; the third £12·858; and the excess of the sum of the 1st and 3d above the 2d, £·39862; which, multiplied by £200, half the given sum, gives £79·724, or £79, 14s. 6d., the value in a single payment.

And dividing this sum by £13·658, the value of an annuity on the joint lives 32 and 24, plus unity, gives £5·8372, the annual payment required.

X. Valuation of Policies.

Case 48. To find the Value of a Policy of Assurance, effected for the whole Term of Life, after any given Period of Endurance.

Rule. 1st. Find the present value of the sum assured as at the age of valuation; 2d. Multiply the value of £1 annuity on the life at the age of valuation, plus unity,* by the annual premium at entry; the product will give the value of the future annual premiums; 3d. Subtract the value of the future annual premiums from the present value of the sum assured as at the age of valuation; the remainder will give the value required.

Ex. Required the value (immediately before the premium becomes due) of a policy for £100, effected ten years ago on a life then aged 40; Northampton Table, 3 per cent.

The present value of the sum assured as at 50 (Case 40), is 60·866. The annual premium for an assurance of £100 on a life of 40 (Case 40), is 3·398; which, multiplied by 13·436, the value of £1 annuity on a life of 50, plus unity, gives 45·656; and 60·866 — 45·656 = 15·210, or £15, 4s. 2¼d.

If the premium for the 11th year has been just paid, it falls to be added to the above value. Hence in this case 15·210 + 3·398 = 18·608, or £18, 12s. 2d.

N. B.—In valuing the policy the same rate of interest and table of mortality are taken as in calculating the value of the assurance; but it may be observed that few or none of the offices give the real worth of a policy, thus found, for its surrender; many of them deducting one-half, some one-fourth, others three-fifths.

XI. Valuation of Bonuses.

Case 49. To find the Value of any given Amount of Bonus, declared as an Addition to a Policy.

Rule. Multiply the given amount of bonus by the present value of £1, payable on the decease of the party.

Ex. Required the present value of a bonus of £500, the present age of the party being 42; Northampton Table, 4 per cent.

The present value of £1, payable on the decease of a life of 42, is (Case 40) ·46777; and 500 × ·46777 = 233·885, or £233, 17s. 9d.

Case 50. To find what Reduction of the future Annual Premium is equivalent to any assigned Bonus.

Rule. Multiply the annual premium corresponding to the present value of £1 at the given age, by the given amount of bonus; the product will give the equivalent reduction of the future annual premium.

Ex. Required what reduction of annual premium is equivalent to a bonus of £100, declared on a policy of £1750, effected at the age of 47, the annual premium being £56·43, and the present age of the assured 55 years; Carlisle Table, 3 per cent.

The annual premium corresponding to the present value of £1 at age 55 is (Case 40) ·045019; and ·045019 × 100 = 4·5019, the equivalent reduction of annual premium required. Hence 56·43 — 4·5019 = 51·9281, or £51, 18s. 7d., the future annual premium.

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* Unity is added only if the Policy is renounced immediately *before* the annual premium becomes due.

TABLE I. Amount of £1 in any Number of Years not exceeding Seventy-Five.

TABLE II. Present Value of £1 due at the End of any Number of Years not exceeding Seventy-Five.

TABLE I. 6 per cent.	5 per cent.	4 per cent.	3 per cent.	Years.	TABLE II. 3 per cent.	4 per cent.	5 per cent.	6 per cent.
1·060000	1·050000	1·040000	1·030000	1	·970874	·961538	·952381	·943396
1·123600	1·102500	1·081600	1·060900	2	·942596	·924556	·907029	·889996
1·191016	1·157625	1·124864	1·092727	3	·915142	·888996	·863838	·839619
1·262477	1·215506	1·169859	1·125509	4	·888487	·854804	·822702	·792094
1·338226	1·276282	1·216653	1·159274	5	·862609	·821927	·783526	·747258
1·418519	1·340096	1·265319	1·194052	6	·837484	·790315	·746215	·704961
1·503630	1·407100	1·315932	1·229874	7	·813092	·759918	·710681	·665057
1·593848	1·477455	1·368569	1·266770	8	·789409	·730690	·676839	·627412
1·689479	1·551328	1·423312	1·304773	9	·766417	·702587	·644609	·591898
1·790848	1·628895	1·480244	1·343916	10	·744094	·675564	·613913	·558395
1·898299	1·710339	1·539454	1·384234	11	·722421	·649581	·584679	·526788
2·012196	1·795856	1·601032	1·425761	12	·701380	·624597	·556837	·496969
2·132928	1·885649	1·665074	1·468534	13	·680951	·600574	·530321	·468839
2·260904	1·979932	1·731676	1·512590	14	·661118	·577475	·505068	·442301
2·396558	2·078928	1·800944	1·557967	15	·641862	·555264	·481017	·417265
2·540352	2·182875	1·872981	1·604706	16	·623167	·533908	·458112	·393646
2·692773	2·292018	1·947900	1·652848	17	·605016	·513373	·436297	·371364
2·854339	2·406619	2·025817	1·702433	18	·587395	·493628	·415521	·350344
3·025599	2·526950	2·106849	1·753506	19	·570286	·474642	·395734	·330513
3·207135	2·653298	2·191123	1·806111	20	·553676	·456387	·376889	·311805
3·399564	2·785963	2·278768	1·860295	21	·537549	·438834	·358942	·294155
3·603537	2·925261	2·369919	1·916103	22	·521892	·421955	·341850	·277505
3·819750	3·071524	2·464716	1·973587	23	·506692	·405726	·325571	·261797
4·048935	3·225100	2·563304	2·032794	24	·491934	·390121	·310068	·246979
4·291871	3·386355	2·665836	2·093778	25	·477606	·375117	·295303	·232999
4·549383	3·555673	2·772470	2·156591	26	·463695	·360689	·281241	·219810
4·822346	3·733456	2·883369	2·221289	27	·450189	·346817	·267848	·207368
5·111687	3·920129	2·998703	2·287928	28	·437077	·333477	·255094	·195630
5·418388	4·116136	3·118651	2·356566	29	·424346	·320651	·242946	·184557
5·743491	4·321942	3·243398	2·427262	30	·411987	·308319	·231377	·174110
6·088101	4·538039	3·373133	2·500080	31	·399987	·296460	·220359	·164255
6·453387	4·764941	3·508059	2·575083	32	·388337	·285058	·209866	·154957
6·840590	5·003189	3·648381	2·652335	33	·377026	·274094	·199873	·146186
7·251025	5·253348	3·794316	2·731905	34	·366045	·263552	·190355	·137912
7·686087	5·516015	3·946089	2·813862	35	·355383	·253415	·181290	·130105
8·147252	5·791816	4·103933	2·898278	36	·345032	·243669	·172657	·122741
8·636087	6·081407	4·268090	2·985227	37	·334983	·234297	·164436	·115793
9·154252	6·385477	4·438813	3·074783	38	·325226	·225285	·156605	·109239
9·703507	6·704751	4·616366	3·167027	39	·315754	·216621	·149148	·103056
10·28572	7·039989	4·801021	3·262038	40	·306557	·208289	·142046	·097222
10·90286	7·391988	4·993061	3·359899	41	·297628	·200278	·135282	·091719
11·55703	7·761588	5·192784	3·460696	42	·288959	·192575	·128840	·086527
12·25045	8·149667	5·400495	3·564517	43	·280543	·185168	·122704	·081630
12·98548	8·557150	5·616515	3·671452	44	·272372	·178046	·116861	·077009
13·76461	8·985008	5·841176	3·781596	45	·264439	·171198	·111297	·072650
14·59049	9·434258	6·074823	3·895044	46	·256737	·164614	·105997	·068538
15·46592	9·905971	6·317816	4·011895	47	·249259	·158283	·100949	·064658
16·39387	10·40127	6·570528	4·132252	48	·241999	·152195	·096142	·060998
17·37750	10·92133	6·833349	4·256219	49	·234950	·146341	·091564	·057546
18·42015	11·46740	7·106683	4·383906	50	·228107	·140713	·087204	·054288
19·52536	12·04077	7·390951	4·515423	51	·221463	·135301	·083051	·051215
20·69689	12·64281	7·686589	4·650886	52	·215013	·130097	·079096	·048316
21·93870	13·27495	7·994052	4·790412	53	·208750	·125093	·075330	·045582
23·25502	13·93870	8·313814	4·934125	54	·202670	·120282	·071743	·043001
24·65032	14·63563	8·646367	5·082149	55	·196767	·115656	·068326	·040567
26·12934	15·36741	8·992229	5·234613	56	·191036	·111207	·065073	·038271
27·69710	16·13578	9·351910	5·391651	57	·185472	·106930	·061974	·036105
29·35893	16·94257	9·725987	5·553401	58	·180070	·102817	·059023	·034061
31·12046	17·78970	10·11503	5·720003	59	·174825	·098863	·056212	·032133
32·98769	18·67919	10·51963	5·891603	60	·169733	·095060	·053536	·030314
34·96695	19·61315	10·94041	6·068351	61	·164789	·091404	·050986	·028598
37·06497	20·59380	11·37803	6·250402	62	·159990	·087889	·048558	·026980
39·28887	21·62349	11·83315	6·437914	63	·155330	·084508	·046246	·025452
41·64620	22·70467	12·30648	6·631051	64	·150806	·081258	·044044	·024012
44·14497	23·83990	12·79874	6·829983	65	·146413	·078133	·041946	·022653
46·79367	25·03190	13·31068	7·034882	66	·142149	·075128	·039949	·021370
49·60129	26·28349	13·84311	7·245929	67	·138009	·072238	·038047	·020161
52·57737	27·59766	14·39684	7·463307	68	·133989	·069460	·036235	·019020
55·73201	28·97755	14·97271	7·687206	69	·130086	·066788	·034509	·017943
59·07593	30·42643	15·57162	7·917822	70	·126297	·064219	·032866	·016927
62·62049	31·94775	16·19448	8·155357	71	·122619	·061749	·031301	·015969
66·37772	33·54513	16·84226	8·400017	72	·119047	·059374	·029811	·015065
70·36038	35·22239	17·51595	8·652018	73	·115580	·057091	·028391	·014213
74·58200	36·98351	18·21659	8·911578	74	·112214	·054895	·027039	·013408
79·05692	38·83269	18·94525	9·178926	75	·108945	·052784	·025752	·012649

TABLE III. Amount of £1 per Annum at the End of any Number of Years not exceeding Seventy-Five.

TABLE IV. Present Value of £1 per Annum for any Number of Years not exceeding Seventy-Five.

TABLE III. 6 per cent.	TABLE III. 5 per cent.	TABLE III. 4 per cent.	TABLE III. 3 per cent.	Years.	TABLE IV. 3 per cent.	TABLE IV. 4 per cent.	TABLE IV. 5 per cent.	TABLE IV. 6 per cent.
1·000000	1·000000	1·000000	1·000000	1	·970874	·961538	·952381	·943396
2·060000	2·050000	2·040000	2·030000	2	1·913470	1·886095	1·859410	1·833393
3·183600	3·152500	3·121600	3·090900	3	2·828611	2·775091	2·723248	2·673012
4·374616	4·310125	4·246464	4·183627	4	3·717098	3·629895	3·545950	3·465106
5·637093	5·525631	5·416323	5·309136	5	4·579707	4·451822	4·329477	4·212364
6·975319	6·801913	6·632975	6·468410	6	5·417191	5·242137	5·075692	4·917324
8·393838	8·142008	7·898294	7·662462	7	6·230283	6·002055	5·786373	5·582381
9·897468	9·549109	9·214226	8·892336	8	7·019692	6·732745	6·463213	6·209794
11·49132	11·02656	10·58280	10·15911	9	7·786109	7·435332	7·107822	6·801692
13·18079	12·57789	12·00611	11·46388	10	8·530203	8·110896	7·721735	7·360087
14·97164	14·20679	13·48635	12·80780	11	9·252624	8·760477	8·306414	7·886875
16·86994	15·91713	15·02581	14·19203	12	9·954004	9·385074	8·863252	8·383844
18·88214	17·71298	16·62684	15·61779	13	10·63496	9·985648	9·393573	8·852683
21·01507	19·59863	18·29191	17·08632	14	11·29607	10·56312	9·898641	9·294984
23·27597	21·57856	20·02359	18·59891	15	11·93794	11·11839	10·37966	9·712249
25·67253	23·65749	21·82453	20·15688	16	12·56110	11·65230	10·83777	10·10590
28·21288	25·84037	23·69751	21·76159	17	13·16612	12·16567	11·27407	10·47726
30·90565	28·13238	25·64541	23·41444	18	13·75351	12·65930	11·68959	10·82760
33·75999	30·53900	27·67123	25·11687	19	14·32380	13·13394	12·08532	11·15812
36·78559	33·06595	29·77808	26·87037	20	14·87747	13·59033	12·46221	11·46992
39·99273	35·71925	31·96920	28·67649	21	15·41502	14·02916	12·82115	11·76408
43·39229	38·50521	34·24797	30·53678	22	15·93692	14·45112	13·16300	12·04158
46·99583	41·43048	36·61789	32·45288	23	16·44361	14·85684	13·48857	12·30338
50·81558	44·50200	39·08260	34·42647	24	16·93554	15·24696	13·79864	12·55036
54·86451	47·72710	41·64591	36·45926	25	17·41315	15·62208	14·09394	12·78336
59·15638	51·11345	44·31174	38·55304	26	17·87684	15·98277	14·37519	13·00317
63·70577	54·66913	47·08421	40·70963	27	18·32703	16·32959	14·64303	13·21053
68·52811	58·40258	49·96758	42·93092	28	18·76411	16·66306	14·89813	13·40616
73·63980	62·32271	52·96629	45·21885	29	19·18845	16·98371	15·14107	13·59072
79·05819	66·43885	56·08494	47·57542	30	19·60044	17·29203	15·37245	13·76483
84·80168	70·76079	59·32834	50·00268	31	20·00043	17·58849	15·59281	13·92909
90·88978	75·29883	62·70147	52·50276	32	20·38877	17·87355	15·80268	14·08404
97·34316	80·06377	66·20953	55·07784	33	20·76579	18·14765	16·00255	14·23023
104·1838	85·06696	69·85791	57·73018	34	21·13184	18·41120	16·19290	14·36814
111·4348	90·32031	73·65222	60·46208	35	21·48722	18·66461	16·37419	14·49825
119·1209	95·83632	77·59831	63·27594	36	21·83225	18·90828	16·54685	14·62099
127·2681	101·6281	81·70225	66·17422	37	22·16724	19·14258	16·71129	14·73678
135·9042	107·7095	85·97034	69·15945	38	22·49246	19·36786	16·86789	14·84602
145·0585	114·0950	90·40915	72·23423	39	22·80822	19·58448	17·01704	14·94907
154·7620	120·7998	95·02552	75·40126	40	23·11477	19·79277	17·15909	15·04630
165·0477	127·8398	99·82654	78·66330	41	23·41240	19·99305	17·29437	15·13802
175·9505	135·2318	104·8196	82·02320	42	23·70136	20·18563	17·42321	15·22454
187·5076	142·9933	110·0124	85·48389	43	23·98190	20·37079	17·54591	15·30617
199·7580	151·1430	115·4129	89·04841	44	24·25427	20·54884	17·66277	15·38318
212·7435	159·7002	121·0294	92·71986	45	24·51871	20·72004	17·77407	15·45583
226·5081	168·6852	126·8706	96·50146	46	24·77545	20·88465	17·88007	15·52437
241·0986	178·1194	132·9454	100·3965	47	25·02471	21·04294	17·98102	15·58903
256·5645	188·0254	139·2632	104·4084	48	25·26671	21·19513	18·07716	15·65003
272·9584	198·4267	145·8337	108·5406	49	25·50166	21·34147	18·16872	15·70757
290·3359	209·3480	152·6671	112·7969	50	25·72976	21·48218	18·25593	15·76186
308·7561	220·8154	159·7738	117·1808	51	25·95123	21·61749	18·33898	15·81308
328·2814	232·8562	167·1647	121·6962	52	26·16624	21·74758	18·41807	15·86140
348·9783	245·4990	174·8513	126·3471	53	26·37499	21·87267	18·49340	15·90697
370·9170	258·7739	182·8454	131·1375	54	26·57766	21·99296	18·56515	15·94998
394·1720	272·7126	191·1592	136·0716	55	26·77443	22·10861	18·63347	15·99054
418·8223	287·3482	199·8055	141·1538	56	26·96546	22·21982	18·69854	16·02881
444·9517	302·7157	208·7978	146·3884	57	27·15094	22·32675	18·76052	16·06492
472·6488	318·8514	218·1497	151·7800	58	27·33101	22·42957	18·81954	16·09898
502·0077	335·7940	227·8757	157·3334	59	27·50583	22·52843	18·87575	16·13111
533·1282	353·5837	237·9907	163·0534	60	27·67556	22·62349	18·92929	16·16143
566·1159	372·2629	248·5103	168·9450	61	27·84035	22·71489	18·98028	16·19003
601·0828	391·8760	259·4507	175·0134	62	28·00034	22·80278	19·02883	16·21701
638·1478	412·4699	270·8288	181·2638	63	28·15567	22·88729	19·07508	16·24246
677·4367	434·0933	282·6619	187·7017	64	28·30648	22·96855	19·11912	16·26647
719·0829	456·7980	294·9684	194·3328	65	28·45289	23·04668	19·16107	16·28912
763·2278	480·6379	307·7671	201·1627	66	28·59504	23·12181	19·20102	16·31049
810·0215	505·6698	321·0778	208·1976	67	28·73305	23·19405	19·23907	16·33065
859·6228	531·9533	334·9209	215·4436	68	28·86704	23·26351	19·27530	16·34967
912·2002	559·5510	349·3177	222·9069	69	28·99712	23·33030	19·30981	16·36762
967·9322	588·5285	364·2905	230·5941	70	29·12342	23·39451	19·34268	16·38454
1027·008	618·9549	379·8621	238·5119	71	29·24604	23·45626	19·37398	16·40051
1089·629	650·9027	396·0566	246·6672	72	29·36509	23·51564	19·40379	16·41558
1156·006	684·4478	412·8988	255·0673	73	29·48067	23·57273	19·43218	16·42979
1226·367	719·6702	430·4148	263·7193	74	29·59288	23·62763	19·45922	16·44320
1300·949	756·6537	448·6314	272·6309	75	29·70183	23·68041	19·48497	16·45585
Value of Perpetual Annuity....					33·33333	25·00000	20·00000	16·66667

TABLE V. Exhibiting the Annual Decrements of Life, or Law of Mortality, according to Observations made at Northampton and Carlisle.

Age.	Persons Living.		Age.	Persons Living.		Age.	Persons Living.		Age.	Persons Living		Age.	Persons Living.		Age.	Persons Living	
	North-ampton.	Carlisle.		North-ampton.	Carlisle.		North-ampt.	Carlisle.		North-ampt.	Carlisle.		North-ampt.	Carlisle.		North-ampt.	Carlisle.
0	11650	10000	18	5262	6176	36	3935	5307	54	2530	4143	71	1152	2277	88	83	232
1	8650	8461	19	5199	6133	37	3860	5251	55	2448	4073	72	1072	2143	89	62	181
2	7283	7779	20	5132	6090	38	3785	5194	56	2366	4000	73	992	1997	90	46	142
3	6781	7274	21	5060	6047	39	3710	5136	57	2284	3924	74	912	1841	91	34	105
4	6446	6998	22	4985	6005	40	3635	5075	58	2202	3842	75	832	1675	92	24	75
5	6249	6797	23	4910	5963	41	3559	5009	59	2120	3749	76	752	1515	93	16	54
6	6065	6676	24	4835	5921	42	3482	4940	60	2038	3643	77	675	1359	94	9	40
7	5925	6594	25	4760	5879	43	3404	4869	61	1956	3521	78	602	1213	95	4	30
8	5815	6536	26	4685	5836	44	3326	4798	62	1874	3395	79	534	1081	96	1	23
9	5735	6493	27	4610	5793	45	3248	4727	63	1793	3268	80	469	953	97	..	18
10	5675	6460	28	4535	5748	46	3170	4657	64	1712	3143	81	406	837	98	..	14
11	5623	6431	29	4460	5698	47	3092	4588	65	1632	3018	82	346	725	99	..	11
12	5573	6400	30	4385	5642	48	3014	4521	66	1552	2894	83	289	623	100	..	9
13	5523	6368	31	4310	5585	49	2936	4458	67	1472	2771	84	234	529	101	..	7
14	5473	6335	32	4235	5528	50	2857	4397	68	1392	2648	85	186	445	102	..	5
15	5423	6300	33	4160	5472	51	2776	4338	69	1312	2525	86	145	367	103	..	3
16	5373	6261	34	4085	5417	52	2694	4276	70	1232	2401	87	111	296	104	..	1
17	5320	6219	35	4010	5362	53	2612	4211									

TABLE VI. Value of an Annuity of £1 on a Single Life (or Number of Years' Purchase of an Annuity), according to the Probabilities of Life at Northampton.

Age.	3 per cent.	4 per cent.	5 per cent.	6 per cent.	Age.	3 per cent.	4 per cent.	5 per cent.	6 per cent.
0	12·270	10·327	8·863		48	12·951	11·685	10·616	9·707
1	16·021	13·465	11·563	10·107	49	12·693	11·475	10·443	9·563
2	18·599	15·633	13·420	11·724	50	12·436	11·264	10·269	9·417
3	19·575	16·462	14·135	12·348	51	12·183	11·057	10·097	9·273
4	20·210	17·010	14·613	12·769	52	11·930	10·849	9·925	9·129
5	20·473	17·248	14·827	12·962	53	11·674	10·637	9·748	8·980
6	20·727	17·482	15·041	13·150	54	11·414	10·421	9·567	8·827
7	20·853	17·611	15·166	13·275	55	11·150	10·201	9·382	8·670
8	20·885	17·662	15·226	13·337	56	10·882	9·977	9·193	8·509
9	20·812	17·625	15·210	13·335	57	10·611	9·749	8·999	8·343
10	20·663	17·523	15·139	13·285	58	10·337	9·516	8·801	8·173
11	20·480	17·393	15·043	13·212	59	10·058	9·280	8·599	7·999
12	20·283	17·251	14·937	13·130	60	9·777	9·039	8·392	7·820
13	20·081	17·103	14·826	13·044	61	9·493	8·795	8·181	7·637
14	19·872	16·950	14·710	12·953	62	9·205	8·547	7·966	7·449
15	19·657	16·791	14·588	12·857	63	8·910	8·291	7·742	7·253
16	19·435	16·625	14·460	12·755	64	8·611	8·030	7·514	7·052
17	19·218	16·462	14·334	12·655	65	8·304	7·761	7·276	6·841
18	19·013	16·309	14·217	12·562	66	7·994	7·488	7·034	6·625
19	18·820	16·167	14·108	12·477	67	7·682	7·211	6·787	6·405
20	18·638	16·033	14·007	12·398	68	7·367	6·930	6·536	6·179
21	18·470	15·912	13·917	12·329	69	7·051	6·647	6·281	5·949
22	18·311	15·797	13·833	12·265	70	6·734	6·361	6·023	5·716
23	18·148	15·680	13·746	12·200	71	6·418	6·075	5·764	5·479
24	17·983	15·560	13·658	12·132	72	6·103	5·790	5·504	5·241
25	17·814	15·438	13·567	12·063	73	5·794	5·507	5·245	5·004
26	17·642	15·312	13·473	11·992	74	5·491	5·230	4·990	4·769
27	17·467	15·184	13·377	11·917	75	5·199	4·962	4·744	4·542
28	17·289	15·053	13·278	11·841	76	4·925	4·710	4·511	4·326
29	17·107	14·918	13·177	11·763	77	4·652	4·457	4·277	4·109
30	16·922	14·781	13·072	11·682	78	4·372	4·197	4·035	3·884
31	16·732	14·639	12·965	11·598	79	4·077	3·921	3·776	3·641
32	16·540	14·495	12·854	11·512	80	3·781	3·643	3·515	3·394
33	16·343	14·347	12·740	11·423	81	3·499	3·377	3·263	3·156
34	16·142	14·195	12·623	11·331	82	3·229	3·122	3·020	2·926
35	15·938	14·039	12·502	11·236	83	2·982	2·887	2·797	2·713
36	15·729	13·880	12·377	11·137	84	2·793	2·708	2·627	2·551
37	15·515	13·716	12·249	11·035	85	2·620	2·543	2·471	2·402
38	15·298	13·548	12·116	10·929	86	2·462	2·393	2·328	2·266
39	15·075	13·375	11·979	10·819	87	2·312	2·251	2·193	2·138
40	14·848	13·197	11·837	10·705	88	2·185	2·131	2·080	2·031
41	14·620	13·018	11·695	10·589	89	2·013	1·967	1·924	1·882
42	14·391	12·838	11·551	10·473	90	1·794	1·758	1·723	1·689
43	14·160	12·657	11·407	10·356	91	1·501	1·474	1·447	1·422
44	13·929	12·472	11·258	10·235	92	1·190	1·171	1·153	1·136
45	13·692	12·283	11·105	10·110	93	·839	·827	·816	·806
46	13·450	12·089	10·947	9·980	94	·536	·530	·524	·518
47	13·203	11·890	10·784	9·846	95	·242	·240	·238	·236

TABLE VII. Value of an Annuity of £1, on a Single Life (or Number of Years' Purchase of an Annuity), according to the Probabilities of Life at Carlisle.

Age.	3 per cent.	4 per cent.	5 per cent.	6 per cent.	Age.	3 per cent.	4 per cent.	5 per cent.	6 per cent.
0	17·320	14·283	12·083	10·439	52	13·558	12·258	11·154	10·208
1	20·085	16·556	13·995	12·078	53	13·180	11·945	10·892	9·988
2	21·501	17·728	14·983	12·925	54	12·798	11·627	10·624	9·761
3	22·683	18·717	15·824	13·652	55	12·408	11·300	10·347	9·524
4	23·285	19·233	16·271	14·042	56	12·014	10·966	10·063	9·280
5	23·693	19·594	16·590	14·325	57	11·614	10·625	9·771	9·027
6	23·846	19·747	16·735	14·460	58	11·218	10·286	9·478	8·772
7	23·867	19·792	16·790	14·518	59	10·841	9·963	9·199	8·529
8	23·801	19·766	16·786	14·526	60	10·491	9·663	8·940	8·304
9	23·677	19·693	16·742	14·500	61	10·180	9·398	8·712	8·108
10	23·512	19·585	16·669	14·448	62	9·875	9·137	8·487	7·913
11	23·327	19·460	16·581	14·384	63	9·567	8·872	8·258	7·714
12	23·143	19·336	16·494	14·321	64	9·246	8·593	8·016	7·502
13	22·957	19·210	16·406	14·257	65	8·917	8·307	7·765	7·281
14	22·769	19·082	16·316	14·191	66	8·578	8·010	7·503	7·049
15	22·582	18·956	16·227	14·126	67	8·228	7·700	7·227	6·803
16	22·404	18·837	16·144	14·067	68	7·869	7·380	6·941	6·546
17	22·232	18·723	16·066	14·012	69	7·499	7·049	6·643	6·277
18	22·058	18·608	15·987	13·956	70	7·123	6·709	6·336	5·998
19	21·879	18·488	15·904	13·897	71	6·737	6·358	6·015	5·704
20	21·694	18·363	15·817	13·835	72	6·373	6·026	5·711	5·424
21	21·504	18·233	15·726	13·769	73	6·044	5·725	5·435	5·170
22	21·304	18·095	15·628	13·697	74	5·752	5·488	5·190	4·944
23	21·098	17·951	15·525	13·621	75	5·512	5·239	4·989	4·760
24	20·885	17·801	15·417	13·541	76	5·277	5·024	4·792	4·579
25	20·665	17·645	15·303	13·456	77	5·059	4·825	4·609	4·410
26	20·442	17·486	15·187	13·368	78	4·838	4·622	4·422	4·238
27	20·212	17·320	15·065	13·275	79	4·592	4·394	4·210	4·040
28	19·981	17·154	14·942	13·182	80	4·365	4·183	4·015	3·858
29	19·761	16·997	14·827	13·096	81	4·119	3·953	3·799	3·656
30	19·556	16·852	14·723	13·020	82	3·898	3·746	3·606	3·474
31	19·348	16·705	14·617	12·942	83	3·672	3·534	3·406	3·286
32	19·134	16·552	14·506	12·860	84	3·454	3·329	3·211	3·102
33	18·910	16·390	14·387	12·771	85	3·229	3·115	3·009	2·909
34	18·675	16·219	14·260	12·675	86	3·033	2·928	2·830	2·739
35	18·433	16·041	14·127	12·573	87	2·873	2·776	2·685	2·599
36	18·183	15·856	13·987	12·465	88	2·776	2·683	2·597	2·515
37	17·928	15·666	13·843	12·354	89	2·665	2·577	2·495	2·417
38	17·669	15·471	13·695	12·239	90	2·499	2·416	2·339	2·266
39	17·405	15·272	13·542	12·120	91	2·481	2·398	2·321	2·248
40	17·143	15·074	13·390	12·002	92	2·577	2·492	2·412	2·337
41	16·890	14·883	13·245	11·890	93	2·687	2·600	2·518	2·440
42	16·640	14·694	13·101	11·779	94	2·736	2·650	2·569	2·492
43	16·389	14·505	12·957	11·668	95	2·757	2·674	2·596	2·522
44	16·130	14·308	12·806	11·551	96	2·704	2·628	2·555	2·486
45	15·863	14·104	12·648	11·428	97	2·559	2·492	2·428	2·368
46	15·585	13·889	12·480	11·296	98	2·388	2·332	2·278	2·227
47	15·294	13·662	12·301	11·154	99	2·131	2·087	2·045	2·004
48	14·986	13·419	12·107	10·998	100	1·683	1·653	1·624	1·596
49	14·654	13·153	11·892	10·823	101	1·228	1·210	1·192	1·175
50	14·303	12·869	11·660	10·631	102	·771	·762	·753	·744
51	13·932	12·566	11·410	10·422	103	·324	·321	·317	·314

TABLE VIII. Value of an Annuity of £1 on a Single Life (or Number of Years' Purchase of an Annuity), according to the Probabilities of Life among the Government Annuitants; reckoning Interest at the rate of 5 per cent. per Annum.

Age.	Male.	Female.	Age.	Male.	Female.	Age.	Male.	Female.	Age.	Male.	Female.
14	15·614	16·336	29	14·475	15·302	44	12·581	13·713	59	9·226	10·597
15	15·484	16·244	30	14·393	15·216	45	12·392	13·568	60	8·996	10·330
16	15·356	16·174	31	14·306	15·126	46	12·192	13·414	61	8·752	10·052
17	15·235	16·112	32	14·214	15·033	47	11·976	13·251	62	8·494	9·766
18	15·125	16·054	33	14·114	14·938	48	11·749	13·080	63	8·225	9·476
19	15·031	16·000	34	14·007	14·842	49	11·515	12·900	64	7·954	9·181
20	14·950	15·946	35	13·892	14·744	50	11·274	12·710	65	7·682	8·884
21	14·883	15·886	36	13·770	14·648	51	11·032	12·508	66	7·409	8·584
22	14·840	15·824	37	13·643	14·549	52	10·797	12·295	67	7·153	8·284
23	14·803	15·759	38	13·512	14·447	53	10·564	12·073	68	6·900	7·982
24	14·766	15·691	39	13·376	14·339	54	10·336	11·842	69	6·648	7·676
25	14·727	15·619	40	13·235	14·227	55	10·112	11·604	70	6·399	7·369
26	14·683	15·544	41	13·087	14·107	56	9·900	11·361	71	6·157	7·072
27	14·620	15·466	42	12·927	13·982	57	9·670	11·112	72	5·919	6·778
28	14·550	15·385	43	12·760	13·851	58	9·450	10·857			

TABLE IX. Value of an Annuity of £1 (or Number of Years' Purchase of an Annuity) on the Joint Continuance of Two Lives not under 15, nor exceeding 75 Years of Age, according to the Carlisle Table of Mortality, and reckoning Interest at the several Rates of 3, 4, 5, and 6 per cent. per Annum.

Ages.		3 per cent.	4 per cent.	5 per cent.	6 per cent.
Equal.					
15	15	18·908	16·272	14·215	12·578
16	16	18·719	16·134	14·112	12·499
17	17	18·542	16·007	14·018	12·428
18	18	18·365	15·880	13·925	12·356
19	19	18·182	15·748	13·827	12·284
20	20	17·993	15·610	13·724	12·206
21	21	17·797	15·466	13·616	12·123
22	22	17·588	15·310	13·497	12·031
23	23	17·372	15·148	13·372	11·933
24	24	17·148	14·978	13·240	11·829
25	25	16·916	14·800	13·101	11·718
26	26	16·681	14·620	12·960	11·605
27	27	16·437	14·431	12·811	11·485
28	28	16·196	14·244	12·663	11·365
29	29	15·976	14·075	12·530	11·259
30	30	15·784	13·930	12·419	11·173
31	31	15·591	13·784	12·308	11·086
32	32	15·392	13·632	12·191	10·995
33	33	15·180	13·469	12·064	10·894
34	34	14·954	13·294	11·926	10·783
35	35	14·720	13·111	11·780	10·666
36	36	14·477	12·919	11·627	10·541
37	37	14·231	12·724	11·470	10·413
38	38	13·981	12·525	11·309	10·281
39	39	13·727	12·322	11·144	10·145
40	40	13·481	12·125	10·984	10·014
41	41	13·254	11·945	10·839	9·896
42	42	13·036	11·772	10·701	9·785
43	43	12·822	11·602	10·566	9·677
44	44	12·600	11·426	10·425	9·563
45	45	12·371	11·243	10·278	9·444
46	46	12·128	11·047	10·119	9·314
47	47	11·870	10·837	9·947	9·172
48	48	11·591	10·607	9·756	9·013
49	49	11·279	10·345	9·535	8·826
50	50	10·942	10·059	9·291	8·617
51	51	10·579	9·748	9·023	8·384
52	52	10·215	9·434	8·751	8·147
53	53	9·849	9·117	8·474	7·905
54	54	9·480	8·796	8·192	7·656
55	55	9·103	8·465	7·900	7·397
56	56	8·721	8·128	7·600	7·130
57	57	8·334	7·783	7·293	6·853
58	58	7·954	7·444	6·988	6·577
59	59	7·605	7·131	6·705	6·322
60	60	7·295	6·854	6·456	6·097
61	61	7·044	6·630	6·257	5·919
62	62	6·804	6·417	6·067	5·748
63	63	6·563	6·202	5·875	5·576
64	64	6·308	5·974	5·669	5·390
65	65	6·047	5·738	5·456	5·197
66	66	5·774	5·490	5·230	4·991
67	67	5·486	5·228	4·990	4·770
68	68	5·188	4·954	4·737	4·537
69	69	4·877	4·666	4·471	4·289
70	70	4·556	4·367	4·191	4·028
71	71	4·217	4·050	3·893	3·748
72	72	3·904	3·755	3·615	3·485
73	73	3·631	3·497	3·371	3·254
74	74	3·400	3·279	3·165	3·058
75	75	3·231	3·119	3·015	2·916
Diff. 5 Years.					
15	20	18·423	15·922	13·959	12·385
16	21	18·230	15·781	13·853	12·304
17	22	18·036	15·639	13·746	12·222
18	23	17·838	15·493	13·636	12·137
19	24	17·633	15·341	13·520	12·047
20	25	17·421	15·182	13·398	11·952
21	26	17·204	15·019	13·272	11·858
22	27	16·977	14·846	13·137	11·746
23	28	16·747	14·670	13·000	11·637
24	29	16·524	14·500	12·867	11·532
25	30	16·311	14·339	12·742	11·433
26	31	16·097	14·176	12·615	11·333
27	32	15·875	14·006	12·482	11·227
28	33	15·648	13·830	12·344	11·116
29	34	15·424	13·657	12·208	11·007
30	35	15·209	13·491	12·078	10·904
31	36	14·989	13·321	11·944	10·797
32	37	14·764	13·146	11·806	10·686
33	38	14·531	12·964	11·661	10·569
34	39	14·290	12·773	11·506	10·445
35	40	14·048	12·581	11·354	10·320
36	41	13·812	12·394	11·204	10·198
37	42	13·579	12·209	11·056	10·078
38	43	13·346	12·024	10·907	9·957
39	44	13·107	11·833	10·753	9·831
40	45	12·868	11·641	10·598	9·705
41	46	12·630	11·450	10·444	9·579
42	47	12·389	11·256	10·287	9·450
43	48	12·139	11·053	10·121	9·314
44	49	11·868	10·830	9·937	9·161
45	50	11·580	10·591	9·737	8·994
46	51	11·271	10·332	9·519	8·808
47	52	10·955	10·065	9·292	8·614
48	53	10·628	9·787	9·054	8·410
49	54	10·284	9·492	8·799	8·189
50	55	9·924	9·181	8·528	7·952
51	56	9·550	8·855	8·242	7·699
52	57	9·172	8·524	7·960	7·440
53	58	8·797	8·194	7·657	7·179
54	59	8·439	7·876	7·375	6·928
55	60	8·098	7·574	7·106	6·685
56	61	7·788	7·299	6·860	6·466
57	62	7·480	7·026	6·615	6·246
58	63	7·175	6·752	6·370	6·024
59	64	6·875	6·482	6·127	5·805
60	65	6·589	6·225	5·896	5·594
61	66	6·323	5·986	5·678	5·398
62	67	6·054	5·743	5·458	5·198
63	68	5·779	5·493	5·230	4·990
64	69	5·490	5·229	4·988	4·767
65	70	5·193	4·966	4·737	4·534
66	71	4·882	4·667	4·469	4·286
67	72	4·580	4·386	4·207	4·041
68	73	4·297	4·123	3·981	3·810
69	74	4·036	3·878	3·731	3·594
70	75	3·804	3·661	3·528	3·403
Diff. 10 Years.					
15	25	17·794	15·460	13·608	12·115
16	26	17·578	15·298	13·483	12·017
17	27	17·363	15·136	13·359	11·919
18	28	17·149	14·975	13·235	11·822
19	29	16·943	14·821	13·117	11·730
20	30	16·749	14·677	13·008	11·646
21	31	16·551	14·530	12·896	11·559
22	32	16·344	14·374	12·776	11·466
23	33	16·126	14·208	12·648	11·365
24	34	15·897	14·032	12·510	11·255
25	35	15·660	13·848	12·365	11·139
26	36	15·417	13·658	12·214	11·018
27	37	15·168	13·462	12·058	10·891
28	38	14·918	13·265	11·900	10·763
29	39	14·675	13·074	11·747	10·639
30	40	14·449	12·897	11·607	10·526
31	41	14·232	12·728	11·474	10·420
32	42	14·017	12·560	11·342	10·315
33	43	13·796	12·389	11·207	10·207
34	44	13·569	12·208	11·063	10·091

Ages.		3 per cent.	4 per cent.	5 per cent.	6 per cent.
Dif. 10 years.					
35	45	13·331	12·019	10·912	9·968
36	46	13·082	11·819	10·750	9·836
37	47	12·823	11·610	10·579	9·696
38	48	12·550	11·388	10·396	9·545
39	49	12·257	11·146	10·195	9·376
40	50	11·954	10·894	9·984	9·197
41	51	11·645	10·635	9·766	9·012
42	52	11·338	10·378	9·548	8·827
43	53	11·031	10·120	9·329	8·639
44	54	10·720	9·856	9·104	8·445
45	55	10·400	9·583	8·870	8·243
46	56	10·071	9.301	8·626	8·031
47	57	9·733	9·009	8·372	7·808
48	58	9·392	8·711	8·111	7·578
49	59	9·063	8·416	7·851	7·348
50	60	8·729	8·132	7·601	7·127
51	61	8·429	7·869	7·370	6·923
52	62	8·135	7·611	7·142	6·721
53	63	7·839	7·350	6·911	6·515
54	64	7·533	7·078	6·669	6·299
55	65	7·219	6·798	6·418	6·073
56	66	6·896	6·508	6·156	5·836
57	67	6·562	6·205	5·881	5·585
58	68	6·224	5·897	5·600	5·328
59	69	5·890	5·591	5·319	5·069
60	70	5·565	5·293	5·044	4·816
61	71	5·254	5·006	4·779	4·569
62	72	4·963	4·737	4·529	4·337
63	73	4·699	4·492	4·302	4·125
64	74	4·459	4·269	4·094	3·931
65	75	4·257	4·082	3·921	3·770
Dif. 15 years.					
15	30	17·063	14·918	13·195	11·793
16	31	16·865	14·771	13·083	11·707
17	32	16·669	14·625	12·973	11·622
18	33	16·466	14·473	12·857	11·532
19	34	16·252	14·311	12·733	11·435
20	35	16·031	14·142	12·602	11·332
21	36	15·802	13·966	12·464	11·223
22	37	15·565	13·782	12·319	11·107
23	38	15·322	13·593	12·169	10·986
24	39	15·073	13·398	12·013	10·860
25	40	14·824	13·202	11·856	10·733
26	41	14·584	13·014	11·706	10·612
27	42	14·344	12·825	11·556	10·491
28	43	14·107	12·638	11·407	10·371
29	44	13·875	12·455	11·261	10·254
30	45	13·650	12·278	11·121	10·142
31	46	13·416	12·093	10·974	10·024
32	47	13·171	11·897	10·817	9·896
33	48	12·908	11·685	10·644	9·754
34	49	12·620	11·449	10·449	9·592
35	50	12·314	11·196	10·238	9·414
36	51	11·989	10·924	10·009	9·219
37	52	11·661	10·649	9·776	9·020
38	53	11·330	10·369	9·538	8·815
39	54	10·995	10·084	9·294	8·605
40	55	10·658	9·796	9·046	8·389
41	56	10·325	9·510	8·799	8·175
42	57	9·992	9·223	8·549	7·956
43	58	9·665	8·940	8·302	7·739
44	59	9·353	8·669	8·066	7·532
45	60	9·063	8·417	7·846	7·339
46	61	8·803	8·193	7·652	7·170
47	62	8·545	7·970	7·458	7·001
48	63	8·279	7·739	7·256	6·824
49	64	7·992	7·487	7·034	6·627
50	65	7·691	7·221	6·799	6·417
51	66	7·374	6·939	6·546	6·190
52	67	7·047	6·646	6·282	5·952
53	68	6·713	6·344	6·009	5·704
54	68	6·370	6·033	5·725	5·445
55	70	6·019	5·712	5·431	5·174
56	71	5·656	5·378	5·123	4·888
57	72	5·310	5·058	4·826	4·612
58	73	4·995	4·765	4·553	4·358
59	74	4·719	4·509	4·315	4·136
60	75	4·498	4·304	4·125	3·960

Ages.		3 per cent.	4 per cent.	5 per cent.	6 per cent.
Dif. 20 years.					
15	35	16·295	14·347	12·765	11·462
16	36	16·063	14·169	12·626	11·352
17	37	15·834	13·993	12·489	11·244
18	38	15·603	13·815	12·350	11·133
19	39	15·367	13·632	12·206	11·018
20	40	15·131	13·449	12·062	10·903
21	41	14·903	13·272	11·923	10·793
22	42	14·673	13·094	11·783	10·681
23	43	14·442	12·914	11·641	10·568
24	44	14·202	12·726	11·492	10·449
25	45	13·954	12·530	11·335	10·323
26	46	13·696	12·325	11·170	10·189
27	47	13·425	12·107	10·993	10·044
28	48	13·143	11·878	10·805	9·889
29	49	12·849	11·638	10·607	9·724
30	50	12·551	11·393	10·404	9·554
31	51	12·237	11·132	10·186	9·370
32	52	11·919	10·866	9·962	9·180
33	53	11·594	10·593	9·730	8·982
34	54	11·261	10·311	9·490	8·775
35	55	10·919	10·020	9·240	8·559
36	56	10·570	9·721	8·981	8·334
37	57	10·216	9·416	8·716	8·101
38	58	9·865	9·111	8·449	7·866
39	59	9·531	8·820	8·194	7·642
40	60	9·224	8·553	7·961	7·436
41	61	8·960	8·325	7·763	7·263
42	62	8·705	8·104	7·571	7·096
43	63	8·450	7·884	7·379	6·928
44	64	8·183	7·651	7·175	6·749
45	65	7·910	7·411	6·964	6·562
46	66	7·624	7·159	6·740	6·362
47	67	7·325	6·893	6·503	6·149
48	68	7·012	6·612	6·251	5·922
49	69	6·682	6·314	5·980	5·676
50	70	6·338	6·001	5·695	5·415
51	71	5·977	5·671	5·391	5·135
52	72	5·636	5·357	5·102	4·867
53	73	5·326	5·071	4·837	4·622
54	74	5·048	4·815	4·600	4·402
55	75	4·813	4·598	4·400	4·217
Dif. 25 years					
15	40	15·348	13·623	12·201	11·019
16	41	15·116	13·444	12·061	10·908
17	42	14·894	13·273	11·928	10·803
18	43	14·673	13·103	11·796	10·699
19	44	14·444	12·926	11·657	10·589
20	45	14·207	12·741	11·511	10·473
21	46	13·959	12·545	11·355	10·348
22	47	13·696	12·336	11·187	10·212
23	48	13·417	12·111	11·004	10·062
24	49	13·114	11·864	10·801	9·893
25	50	12·793	11·599	10·581	9·708
26	51	12·454	11·317	10·344	9·507
27	52	12·110	11·029	10·100	9·299
28	53	11·765	10·738	9·853	9·087
29	54	11·425	10·450	9·608	8·876
30	55	11·089	10·164	9·364	8·666
31	56	10·749	9·873	9·114	8·449
32	57	10·402	9·575	8·855	8·223
33	58	10·055	9·275	8·594	7·994
34	59	9·721	8·986	8·341	7·772
35	60	9·410	8·716	8·105	7·565
36	61	9·132	8·476	7·897	7·382
37	62	8·859	8·239	7·691	7·202
38	63	8·584	8·000	7·481	7·018
39	64	8·296	7·748	7·260	6·822
40	65	8·006	7·493	7·034	6·622
41	66	7·713	7·234	6·804	6·416
42	67	7·413	6·967	6·565	6·202
43	68	7·106	6·692	6·319	5·980
44	69	6·790	6·407	6·061	5·746
45	70	6·465	6·113	5·793	5·502
46	71	6·127	5·804	5·510	5·242
47	72	5·806	5·510	5·240	4·993
48	73	5·513	5·241	4·992	4·763
49	74	5·247	4·996	4·766	4·555
50	75	5·022	4·790	4·577	4·390

Ages. Dif. 30 years.		3 per cent.	4 per cent.	5 per cent.	6 per cent.
15	45	14·381	12·884	11·630	10·570
16	46	14·129	12·685	11·472	10·443
17	47	13·872	12·481	11·309	10·312
18	48	13·601	12·264	11·134	10·170
19	49	13·307	12·025	10·939	10·009
20	50	12·995	11·769	10·727	9·833
21	51	12·663	11·494	10·498	9·640
22	52	12·325	11·212	10·261	9·439
23	53	11·981	10·924	10·017	9·231
24	54	11·632	10·629	9·766	9·016
25	55	11·274	10·325	9·505	8·790
26	56	10·911	10·015	9·237	8·558
27	57	10·541	9·696	8·960	8·316
28	58	10·176	9·380	8·684	8·073
29	59	9·836	9·085	8·427	7·847
30	60	9·529	8·820	8·196	7·645
31	61	9·259	8·587	7·995	7·470
32	62	8·993	8·358	7·796	7·296
33	63	8·721	8·122	7·591	7·117
34	64	8·434	7·872	7·372	6·924
35	65	8·140	7·614	7·143	6·721
36	66	7·834	7·343	6·903	6·507
37	67	7·517	7·061	6·651	6·280
38	68	7·191	6·769	6·388	6·043
39	69	6·856	6·466	6·113	5·793
40	70	6·515	6·157	5·832	5·536
41	71	6·169	5·841	5·542	5·269
42	72	5·846	5·544	5·269	5·017
43	73	5·556	5·278	5·023	4·790
44	74	5·299	5·042	4·806	4·589
45	75	5·089	4·850	4·630	4·427
Dif. 35 years.					
15	50	13·131	11·882	10·822	9·913
16	51	12·794	11·603	10·589	9·717
17	52	12·459	11·325	10·356	9·520
18	53	12·122	11·043	10·119	9·318
19	54	11·780	10·755	9·875	9·109
20	55	11·429	10·458	9·621	8·891
21	56	11·072	10·154	9·359	8·665
22	57	10·706	9·840	9·087	8·428
23	58	10·342	9·526	8·814	8·189
24	59	9·994	9·225	8·551	7·959
25	60	9·669	8·943	8·306	7·744
26	61	9·380	8·694	8·090	7·555
27	62	9·094	8·447	7·875	7·367
28	63	8·807	8·198	7·658	7·177
29	64	8·515	7·943	7·434	6·979
30	65	8·224	7·688	7·210	6·781
31	66	7·924	7·423	6·975	6·572
32	67	7·612	7·146	6·728	6·351
33	68	7·288	6·857	6·468	6·116
34	69	6·952	6·554	6·194	5·868
35	70	6·606	6·242	5·910	5·609
36	71	6·251	5·916	5·611	5·334
37	72	5·914	5·607	5·327	5·071
38	73	5·609	5·326	5·068	4·832
39	74	5·337	5·076	4·838	4·619
40	75	5·115	4·872	4·650	4·446

Ages. Dif. 40 years.		3 per cent.	4 per cent.	5 per cent.	6 per cent.
15	55	11·528	10·543	9·692	8·953
16	56	11·166	10·234	9·427	8·724
17	57	10·803	9·923	9·158	8·490
18	58	10·444	9·614	8·890	8·255
19	59	10·101	9·318	8·633	8·030
20	60	9·782	9·043	8·394	7·822
21	61	9·499	8·800	8·184	7·639
22	62	9·218	8·558	7·975	7·457
23	63	8·933	8·311	7·760	7·269
24	64	8·635	8·051	7·532	7·069
25	65	8·329	7·783	7·295	6·869
26	66	8·012	7·503	7·047	6·638
27	67	7·683	7·210	6·785	6·403
28	68	7·345	6·908	6·514	6·158
29	69	7·004	6·600	6·236	5·905
30	70	6·662	6·291	5·954	5·648
31	71	6·309	5·969	5·660	5·378
32	72	5·976	5·664	5·379	5·119
33	73	5·673	5·386	5·123	4·883
34	74	5·403	5·137	4·894	4·671
35	75	5·179	4·933	4·706	4·498
Dif. 45 years.					
15	60	9·852	9·103	8·446	7·867
16	61	9·565	8·857	8·233	7·682
17	62	9·287	8·617	8·026	7·502
18	63	9·006	8·375	7·816	7·318
19	64	8·712	8·120	7·593	7·123
20	65	8·411	7·856	7·361	6·918
21	66	8·099	7·581	7·118	6·702
22	67	7·773	7·292	6·860	6·471
23	68	7·438	6·992	6·591	6·229
24	69	7·091	6·680	6·309	5·973
25	70	6·736	6·358	6·017	5·706
26	71	6·369	6·024	5·710	5·425
27	72	6·022	5·706	5·418	5·155
28	73	5·709	5·418	5·153	4·910
29	74	5·434	5·166	4·920	4·695
30	75	5·213	4·964	4·735	4·524
Dif. 50 years.					
15	65	8·458	7·897	7·398	6·950
16	66	8·142	7·618	7·151	6·731
17	67	7·817	7·331	6·894	6·501
18	68	7·485	7·034	6·628	6·262
19	69	7·141	6·725	6·350	6·010
20	70	6·790	6·407	6·061	5·746
21	71	6·427	6·076	5·758	5·469
22	72	6·083	5·762	5·469	5·202
23	73	5·771	5·475	5·206	4·959
24	74	5·493	5·221	4·971	4·743
25	75	5·263	5·010	4·778	4·565
Dif. 55 years.					
15	70	6·818	6·433	6·084	5·767
16	71	6·452	6·098	5·778	5·486
17	72	6·108	5·784	5·490	5·221
18	73	5·799	5·500	5·228	4·980
19	74	5·524	5·249	4·997	4·766
20	75	5·298	5·042	4·807	4·592
Dif. 60 years.					
15	75	5·315	5·057	4·821	4·604

Principal Works on Annuities and Assurances.—Baily's Doctrine of Life Annuities and Assurances, 1813. Milne's Treatise on the Valuation of Annuities and Assurances, and Construction of Tables of Mortality, 1815. Corbaux's Doctrine of Compound Interest, 1825. Article ANNUITIES in Encyclopædia Britannica. Jones's Treatise on Annuities and Reversionary Payments, published by the Society for the Diffusion of Useful Knowledge, a work chiefly distinguished for the numerous tables which it contains, including a series computed by Barrett's method. See also other works referred to in this article, and in that on INSURANCE ON LIVES.

INVOICE, a mercantile document containing a description of goods sold or consigned, with an account of the charges, if any, that are made against the buyer or consignee. Inland invoices are generally made out in the form of bills of parcels, containing in the title the place, date, and names of the parties. Shipping or exportation invoices are usually headed with a short account of the goods, the names of the vessel and captain, the port of destination, the name of the consignee, and a specification of the account on which the goods are sent.

Pro formâ invoices are statements of supposititious transactions, sometimes made out in order to show the ordinary allowances and charges on goods, and consequently, with the prices, to exhibit the estimated net proceeds.

IODINE, a substance obtained by a chemical process from kelp, from soap-makers' black ash, or from the brown residuary kelp-liquor of the soapboilers. It is soft and friable, of a blueish-black colour, and metallic lustre. Sp. gr. 4·946. It is extremely volatile. Its smell resembles that of diluted chlorine; its taste is acrid. Iodine was discovered in 1812 by M. Courtois of Paris, and its compounds are as yet employed principally in medicine, where it is used in glandular diseases, and as an alterative. Mr Brande is of opinion, however, that from the rich colours of some of its metallic combinations, it might be employed in calico-printing.

IONIAN ISLANDS (UNITED STATES OF THE), a republic, under British protection, situate on the W. and S. coasts of Greece, consisting (besides islets) of seven principal islands; namely, Corfu, Cephalonia, Zante, Santa Maura, Ithaca, Cerigo, and Paxo. Area, 1041 sq. miles. Population in 1839, 221,057. The government is vested in a high commissioner residing at Corfu, who represents the sovereign of Great Britain,—a legislative assembly of 29 members elected by the *syncletæ* or nobles, and 11, styled *integral*, appointed by the commissioner,—and a senate composed of 5 members elected by the legislative assembly, and a president nominated by the commissioner.

These islands are almost all of an irregular form; their coasts are rugged and indented; and barren rocks and heath-covered hills form nearly half their whole contents. The climate is mild, but subject to sudden changes; hurricanes and earthquakes are frequent, especially in Zante, and the sirocco occasionally makes the heat oppressive. The land is mostly in the hands of small proprietors, who let it out on the *métayer* system to tenants paying half the produce as rent. Being more favourable to grape cultivation than to the raising of corn, upwards of three-fourths of the surface available for tillage is laid out in currant grounds, vineyards, and olive-plantations, which are generally well managed. Cephalonia and Zante, however, are the only islands in which currants are grown, with the exception of Ithaca and Santa Maura, in which a few acres are employed for that purpose. Oil and wine are chiefly the produce of Corfu, but in all the islands the olive-tree is more or less cultivated. The currants are gathered in the middle of September; the olives in December. The quantity of bread-corn grown is equal to only one-fourth of the consumption.

In Corfu and Zante, soap is made to some extent; at the latter also, silk, gros-de-naples, and handkerchiefs are woven. In other respects manufactures, properly so termed, can scarcely be said to exist. The wives of the peasants, however, spin and weave a coarse kind of woollen cloth, nearly sufficient for the use of their families; and some coarse blankets and linens are also made.

The imports into the Ionian Islands, on an average of the three years ending 1839, amounted to £657,099; about one-third of which consisted of wheat, brought mostly from Odessa; the chief other articles were Indian corn, live-stock (from Albania and Greece), colonial produce, British manufactures, and dried fish. Of exports, the annual amount, on an average of the same three years, was £334,356; consisting mostly of currants (17,746,648 lbs., £229,299) sent almost wholly to Great Britain; with about 30,833 barrels (each of 16 gallons) of olive oil, and 1,782,770 lbs. soap; the other articles were of very trifling value.

The amount of shipping possessed by the islanders is considerable; much of it is employed in the Levant trade. Of 265,253 tons entered inwards the ports of the different islands in 1839, no fewer than 127,356 tons were Ionian; the remainder was chiefly Greek, Austrian, British, and Russian.

Corfu, situated in the island of that name, in lat. 39° 36′ N., long. 19° 54′ E., is the principal port and seat of government. Pop. 16,000, of whom 4000 are Jews. The town is very strongly fortified. The harbour, which is one of the best in the Levant, and has a depth of about 80 feet, is formed by the Island of Vido, the rocks called Condilonisi, the Lazaretto island, and the New Fort.

The chief other ports are Zante, in the island of the same name, and Argostoli, in Cephalonia.

MEASURES, WEIGHTS, MONEY, DUTIES, &c.

Measures and Weights.—The Imperial system was introduced in 1828, when the stádio of 40 carnaco was made equal to 1 Imp. furlong; the barrel to 16 Imp. gallons, or 128 dicatoli or pints; the kilo, corn measure, to 1 Imp. bushel; the libbra sottile to 1 lb. troy; the libbra grossa to 1 lb. avoird.; and the talanto to 100 lbs. avoird.

The chief old measures are the Zante cloth braccio = 27·18 inches; and silk braccio = 25·37 inches; the Zante barile = 14·68 Imp. galls.; the Corfu barile = 15 Imp. galls.; the Corfu moggio, grain measure, of 8 misure = 4·63 Imp. bushels; the moggio, land-measure, of 8 misure, or 24 zappade = 2 Imp. acres, 1 rood, 24 perches; the quintal of 44 okes = 123·15 lbs. avoird.; and 10 okes = 28 lbs. avoird.

Money.—Accounts are kept in taleri or dollars, each of 100 oboli; also in British money; and in some places in Turkish piastres of 40 paras. The circulating medium is composed of Spanish, American, Austrian and Venetian dollars, the first being reckoned at 104 oboli, the two last at 100 oboli; Spanish doubloons; British silver coins; and Ionian currency, consisting of silver threepences, and copper pieces for ¼th and $\frac{1}{10}$th of a penny. No paper money is in circulation.

Exchange on London fluctuates from about 50¾d. to 51¼d. per Spanish dollar.

Duties on exports: oil and currants, 19½ per cent.; wine, 6 per cent.; soap, 8 per cent., *ad valorem*. The import duty is regulated according to a tariff, non-enumerated articles in which pay 7 or 8 per cent., *ad valorem*.

The Revenue amounts to about £160,000, derived chiefly from export duties and customs; the direct taxes are trifling.

These islands, after many changes, became, in the 15th century, subject to the dominion of Venice. After the downfal of that republic, they were the cause of frequent contention among the Mediterranean powers, whose mutual jealousies led to their being formed, in 1815, into an independent state, under the protection of Great Britain, by whom they are garrisoned with a force of about 3000 men.

IPECACUANHA, a medicinal root derived from several plants growing in S. America. The best is the annulated, yielded by a small shrubby plant (*Cephaëlis Ipecacuanha*), found in moist situations in Brazil and New Granada. It occurs brown, red, and gray, or grayish-white. This kind, sometimes called Brazilian or Lisbon ipecacuan, is exported from Rio Janeiro in bales and barrels. The root is in short pieces, of the thickness of a goose-quill, with numerous circular depressions or clefts, and much twisted; and having a central woody fibre, surrounded by a cortical part, in which its virtues chiefly reside: the larger, therefore, its relative proportions the better.

Another kind, black and weaker, the product of the *Psychotria emetica*, a native of Peru, is sometimes exported from Carthagena.

The primary effect of ipecacuanha is that of stimulating the stomach. If the dose be sufficiently large it acts as an emetic, a purpose for which it is much employed. It was first imperfectly described by Piso in 1648; but it did not come into general use till about 1686, when Helvetius, under the patronage of Louis XIV., introduced it into practice.

IRIDIUM, a rare metal discovered in 1803 by Mr Tennant. It is heavy, brittle, whitish, and when carefully polished, resembles platinum. One of its most remarkable characters is the difficulty with which it is acted upon by acids.

IRON (Dan. *Iern*. Du. *Yzer*. Fr. *Fer*. Ger. *Eisen*. It. & Por. *Ferro*. Rus. *Scheleso*. Sp. *Hierro*. Sw. *Iern*) is at once the most diffused, the most abundant, and the most important of the metals. It has a peculiar gray colour, and strong metallic lustre, which is susceptible of being heightened by polishing. In ductility and malleability it is inferior to several metals, but exceeds them all in tenacity. At common temperatures it is very hard and unyielding; and it is one of the most infusible of the metals; but this disadvantage is counterbalanced for all practical purposes by its possessing the property of *welding* in high perfection. Fusing point, 3479° Fahr. Sp. gr. 7·78. When exposed to the atmosphere it absorbs oxygen, and becomes an oxide, or *rusts*. It is attracted by the magnet, and may itself be rendered permanently magnetic. Its uses are almost innumerable. "Iron," says Dr Ure, "accommodates itself to all our wants, our desires, and even our caprices; it is equally serviceable to the arts, the sciences, to agriculture, and war; the same ore furnishes the sword, the ploughshare, the spring of a watch or of a carriage, the chisel, the chain, the anchor, the compass, the cannon, and the bomb: it is a medicine of much virtue, and the only metal friendly to the human frame." And it was forcibly remarked by Locke, that he who first made known the use of iron "may be truly styled the Father of Arts and Author of Plenty."

This metal is found *native* in very small quantities; but its ores are numerous, and widely diffused. The principal are the following:—The red oxides of iron included under the name of red hæmatite; the brown hæmatite of mineralogists; the black oxide, or magnetic iron ore; and protocarbonate of iron, either pure or in the form of clay iron ore. The three former occur most abundantly in primary districts, and supply the finest kinds of iron,—as those of Sweden and India; while clay ironstone, from which most of the British iron is extracted, occurs in secondary deposits, and chiefly in the coal formation; being found in layers in slaty clay between the beds of coal.

Iron is divided into two distinct qualities; *pig* or cast iron, the metal in its crudest state, and malleable or *bar iron*, the same when freed from impurities by an extension of the processes requisite for the production of the first kind.

Pig or Cast Iron.—The first process is that of *roasting* or calcining the ore in a kiln, in order to drive off the water, sulphur, and arsenic, with which it is more or less combined in its native state, an operation by which it loses one-sixth part of its weight. The roasted ore is then subjected to the process of *smelting*, by which it is reduced into a metallic state by means of fusion. This operation is conducted in a blast-furnace, charged from the top with certain proportions of iron-ore, of coke or coal, and of limestone; the use of the last being to act as a flux to the ore, and promote its fusion. In order to produce the degree of heat necessary for the fusion of the ore, its intenseness is promoted by the forcing in of a current of air, for which purpose the agency of steam is now commonly employed. The fluid metal is allowed to run out from time to time, and conducted into moulds formed in the sand of the smelting-house floor, for the various things made of cast-iron,—from vast beams, wheels, and cylinders of steam-engines, to the smallest articles of domestic use,—or it is conveyed into channels for the *pigs*, the form in which cast-iron is sold as a raw material, and the produce of which from the ore averages about 60 per cent. The term "pig-iron" was given by the workmen: the metal is run off into a main channel which they call the *sow*, and the bars at right angles to it they liken to pigs sucking the teats of the sow.

The quality of pig-iron depends not only upon the nature of the ore, but also upon that of the fuel. The principal subdivision is into foundery-iron and forge-iron.

Foundery-iron is used in the state of pigs for casting; it is of three qualities, distinguished by the numbers 1, 2, and 3:—

No. 1 contains a large proportion of carbon which it has acquired from the coke used for smelting; it is soft and very fluid when melted, so that it will mould into the most delicate forms.

No. 2 contains a smaller proportion of carbon than No. 1; it is also harder, closer grained, and of more regular fracture, more refractory in the furnace, and does not run so freely when melted; but being harder and stronger, it is preferred for purposes where strength and durability are required in preference to delicacy of form.

No. 3, sometimes called dark-gray iron, the only one of the three kinds fit for conversion into bar-iron, varies in the same direction as No. 2 from the qualities of No. 1, but in a greater degree; it is used for heavy work, where it has to bear great strains, and is exposed to constant wear.

Forge-iron is also divided into three qualities,—*bright*, *mottled*, and *white*, appellations which are indicative of their appearance. They all contain carbon, in proportions less than foundery-iron, and diminishing in the order in which they are here mentioned. Bright iron is used extensively for large castings; but the others are applicable only to the manufacture of bar-iron; being from their nature too thick when melted to rum into the shape of the mould, and when cold too weak and brittle to be serviceable as cast-iron, even if the other objection did not exist.

Bar, or Malleable Iron.—In order to convert pig into bar iron, it is first refined, an operation chiefly conducted in the "puddling furnace," by exposure to a strong heat, while a current of air plays upon its surface. By this means any undecomposed ore is reduced, earthy impurities rise to the surface as slag, and carbonaceous matter is burned; and the more complete the separation from these, the better is the iron. As the purity of the metal increases, its fusibility diminishes, until at length, though the temperature continue the same, the iron becomes solid. It is then, while still hot, beaten under the "forge hammer," or (as generally in this country) subjected to the operation of rolling, by which its particles are approximated, and its tenacity greatly increased. By these several processes the metal is converted from a fusible, hard, and brittle substance, to a tough and elastic bar, which is hardly fusible, and which, from its property of yielding and altering its form under the hammer, has acquired the name of malleable iron. In trade, three qualities are distinguished,—common iron, best, and best best, or chain-cable iron.—(*Manufacture of Iron*, Lib. of Useful Know.; *Turner's Chemistry*, *&c.*)

Bar-iron is converted into *steel* by being exposed to the action of heat, in contact with carbonaceous matter, which penetrates its substance, and is *tempered* when red-hot by immersion in water, by which it becomes harder, more elastic, and brittle.

Iron is believed to have been made in Britain on a small scale in the time of the Romans; but we have little authentic information respecting the progress of the trade until we arrive at a comparatively recent period. Down to the 17th century the ore was entirely smelted with charcoal; and there was a considerable number of furnaces in those districts where wood and iron ores were plentiful,—particularly the Weald of Kent, Surrey, and Sussex; but in course of time, wood-fuel becoming scarce, the trade was threatened with decay. Many attempts were made, during the 17th and early part of the 18th century, to retard the decline by the use of pit-coal, but without effect; the simple hand-worked bellows, or the more powerful water-movement, which produced a sufficiency of blast for charcoal, having little effect upon coal; and the number of furnaces, which in 1619 was estimated by Lord Dudley (who in that year obtained a patent for smelting with coal) at 300, fell off towards the middle of the 18th century to 59. Science, however, came to the rescue of one of our greatest staple manufactures. In 1760, Smeaton erected a cylinder blasting-machine for the Carron Company, which, after some improvements, enabled the same furnace that formerly yielded only 10 or 12 tons weekly, to produce 40. Shortly after this, Watt's improvement of the steam-engine, and its application to iron-works, not only revived the trade, but enabled it to distance all foreign competition. Ores that formerly could not be worked with profit, either from their inherent intractableness, or from the small proportion of iron which they contained, were now advantageously submitted to the furnace, and more metal was extracted from the richest ores. Various improvements also took place in the manufacture of bar-iron, particularly by the substitution of hammering machinery for hand-labour, by Mr Cort's invention of "puddling" (patented 1783)—the great distinction of coal-made iron, and also by that gentleman's patent (1784) for the rolling of iron,—while at the same time the extent of the iron-works were greatly enlarged, and improvements made in the form of the furnaces. Of recent inventions, by far the most important is the substitution of the *hot* for the cold blast, by artificially heating the currents of air impelled into the furnace. This discovery of Mr Neilson of the Clyde Iron-Works, operates by obtaining a larger quantity of metal with a less degree of fuel. In 1829, with cold air, 1 ton of iron consumed 8 tons 1 cwt. of coal; in 1833, with hot air, the same quantity of iron was procured with only 2 tons 5 cwt. The nature both of the coal and the ore, however, is said to have much to do with this discovery, as in the south the gain in the consumption of fuel has not been so great; and a prejudice exists among the English iron-masters against the quality of the hot-blast metal.

The result of these inventions and improvements presents some of the most extraordinary facts in the history of manufactures, excepting perhaps the cotton-trade. In 1740, the quantity of iron made in England and Wales had sunk to 17,350 tons; in 1788, after the cylinder invention, the total annual produce was

68,300 tons. By 1796 it was 108,793 tons, or, including Scotland, 124,879; the iron trade in that country having more than doubled in eight years. In 1802, the annual produce of Great Britain was estimated at 170,000 tons; in 1823, it had grown to 442,066 tons; and in 1828, to 702,584 tons (*Porter's Progress of the Nation*, sec. 2, ch. 6). But, owing to the recently extended applications of iron to railways, machinery, gas-apparatus, roofs, columns, windows, and furniture, this rapid advance was nothing to its progress in the next decade. "In 1835," says Sir John J. Guest, an experienced ironmaster, "it was estimated at about a million of tons; in 1836, it was estimated at 1,200,000 tons; and the estimate made by a very intelligent person who went round the works in 1839 was 1,512,000 tons, which is rather increasing"* (*Report on Import Duties*, 1840. *Evidence*, Q. 392). This increase was proportionally greatest in Scotland, where such was the expansion of the iron-trade, that the produce, though only 37,700 tons in 1828, was, according to a report laid before the Glasgow Chamber of Commerce, augmented in 1840 to 250,000 tons, a quantity greater by 47 per cent. than the total produce of all Britain in 1802.

The price of iron has been subject to very great fluctuations,—especially of late years. In September 1824, the current price of common bars at the shipping port was £9 a-ton; in March 1825, a period of great speculation, it rose to £14; but by March 1830, owing to the extended production consequent on this high rate, it fell to £5, 5s. a-ton. Since that period, in consequence of the increased demand for railways and other purposes, the price has risen considerably, and at present (February 1842) it is quoted, in bars, at £6, 15s. a-ton; that of pig being £4. Taking the quantity stated above, 1,500,000 tons, as the present annual produce, and applying this last price of £4, gives the value in pig at £6,000,000; to which, adding £3,000,000 as the cost of converting seven-tenths thereof (the common estimate) into bars, bolts, rods, sheets, and the other forms of wrought iron, makes the total annual value of the manufacture £9,000,000.

The great seats of the trade are,—in Staffordshire, near Birmingham, around Walsall, Bilston, and Dudley;—in S. Wales, around Merthyr Tydvil, in Glamorganshire, and in the Forest of Dean on the border of Wales;—in Shropshire, in and around Colebrook Dale. There are besides many works in Yorkshire, Lancashire, and Derbyshire. In Scotland, the works are almost all in the neighbourhood of Glasgow and Falkirk; the chief are those of Calder, Gartsherrie, Clyde, Dundyvan, Monkland, and Carron. In Ireland there are no iron-works of any importance.

The exportation of British iron has increased in a degree corresponding to its production, notwithstanding the high duties with which it is loaded in almost all foreign countries. In 1820, the quantity of wrought and unwrought iron and steel shipped was 85,066 tons, of the declared value of £1,131,788; in 1839, 247,912 tons, and value £2,719,824; and in 1840, 268,328 tons, value £2,524,859: in 1841 the value was £2,867,950. The exportations in 1839 consisted of 124,138 tons bar-iron, about one-half of which was sent to the United States, and the remainder chiefly to Italy, Holland, India, and the colonies; 12,315 tons in bolts and rods, sent to Portugal, Italy, Germany, and India; 43,460 tons pig-iron, shipped mostly to the United States, France, and Holland; 10,837 tons cast-iron, chiefly to the United States and British colonies; 777 tons wire to Belgium, Germany, United States, &c.; 3108 tons of anchors and grapnels, 11,225 tons hoops, 7195 tons nails, and 30,334 tons of all other sorts of wrought-iron (except ordnance), chiefly sent to the colonies, India, United States, Holland, Germany, and S. of Europe; 549 tons old iron; and 3974 tons unwrought steel, mostly to the United States.

The superiority of Great Britain above all the other countries of the world, in the production of iron, does not extend beyond quantity and cheapness; in point of quality the British iron is greatly inferior to that of Sweden, Norway, Russia, India, and other countries, which, besides possessing a superior ore, have the means of converting it into metal by the aid of charcoal, an agent preferred to coal, at least in the preparation of bar-iron. Hence a preference is given to foreign iron in the manufacture of cutlery; and about 20,000 tons are annually imported for that purpose, mostly at Hull, for transmission to Sheffield. It is principally brought from Sweden, where the bar-iron is prepared by hammering instead of rolling; the finest being that made from the magnetical ore of the celebrated mines of Dannemora,* near Upsala; and Taberg, near Lake Wetter. Except for the purposes of steel, Great Britain has not been an importing country of iron since 1790.

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* In Mr Scrivenor's History of the Iron Trade, the number of furnaces in blast, and estimated annual make of iron in the different districts in 1839, was stated as follows:—South Wales and Forest of Dean, 125 furnaces, 532,480 tons; South Staffordshire, 108 furnaces, 338,730 tons; North Staffordshire, 10 furnaces, 28,600 tons; Shropshire, 24 furnaces, 86,060 tons; Yorkshire, 31 furnaces, 89,960 tons; Derbyshire, 13 furnaces, 37,440 tons; North Wales, 12 furnaces, 28,080 tons; Newcastle-on-Tyne, 5 furnaces, 11,440 tons; Scotland, 50 furnaces, 195,000 tons. Total, 378 furnaces, 1,347,790 tons.

The present annual produce in foreign countries, in so far as it is known or has been estimated, may be stated as follows:—France possesses 475 furnaces, which produce 347,700 tons of cast-metal (*fonte*), worth £2,520,000; and 1500 refining furnaces, which produce 224,100 tons of malleable iron (*gros fer*), worth £3,720,000 (*Report of Minister of Commerce*, 1841): Sweden, 100,000 tons: United States (in 1837), 250,000 tons: Belgium (in 1837), 135,000 tons, from 89 furnaces: Saxony, 99,427 quintals, from 19 furnaces: Styria, 20,000 tons: Spain, 8000 tons.—(*Scrivenor's History of the Iron Trade.*)

IRON MANUFACTURES, OR HARDWARE AND CUTLERY. These branches of industry have been in part described in the preceding pages. The larger and coarser articles are mostly cast at the founderies in S. Wales and other districts; but the smaller and finer articles are principally made at Birmingham and Sheffield, the two greatest seats in the world of the manufactures from iron and steel.

Birmingham lies in the N. W. corner of Warwickshire, at a moderate distance from the Staffordshire mines,—a proximity which has rendered it, to a certain extent, the seat of iron manufactures from a remote time. These, however, were comparatively trifling until after 1790, when the discovery of the improved methods of smelting with coal, and the construction of canals from the town towards the principal points of commercial distribution, caused such a rapid advance of prosperity that the population which in 1789 was only 53,735, grew in 1801 to 73,670; in 1821 to 106,722, and in 1841 to 190,467. The manufacture now comprehends the making of firearms, swords, bayonets, steam-engines, anvils, kitchen-furniture, nails, tools, locks, hinges, buttons, harness, tea-urns, chains, wire, and in short almost every kind of iron work, down to needles, pins, and the minutest article of a lady's toilet. Of late years, the manufacture of cast-iron goods has been rapidly improving and extending. Formerly the principal castings were heavy kitchen-furniture; but increased care in the selection of the metal, and a desire to produce elegant forms at a cheap rate, has led to cast-iron articles being fabricated of small size, and of light and tasteful patterns, which, when coloured by bronzing, almost equal the more expensive brass wares; and in hollow vessels, such perfection in thinness and lightness is attained, that the use of beaten copper is almost forgotten (*Pen. Cyclop.*, art. BIRMINGHAM). Besides iron and steel goods, the town is distinguished for the manufacture of brass, plated and japanned wares, toys and trinkets. Of the latter the production is so immense, that Birmingham was called by Mr Burke the "toy-shop of Europe." The production of so many and minute articles has necessarily led to an almost inconceivable subdivision of employments; while the amount of business, of which some of these trifling articles form the subject, is truly wonderful. In 1824, Mr Osler, a manufacturer, stated to a committee of the House of Commons that he had received a single order for £500 worth of dolls' eyes! The manufacture of iron-wares, however, forms the great staple of Birmingham, as well as the district of which it is the metropolis, including the tract to the N.W., which embraces the towns of Dudley, Wolverhampton, Bilston, Walsall, Wednesbury, and Stourbridge.

Sheffield, in the W. Riding of Yorkshire, has been distinguished from a remote period for her cutlery; though, as in the case of Birmingham, it is only since 1790 that the manufacture has risen into importance. The population of the town and parish, which in 1801 was 45,776, grew in 1821 to 65,179, and in 1841 to 110,891. Its staples are knives of every variety, razors, surgical instruments, files, scissors, scythes, saws, and all sorts of edge-tools; their quality being such as to lead to their being deservedly held in the highest estimation throughout the world. The conversion of iron into steel is also carried on to a greater extent in this town than in any other part of the kingdom. The manufactures of Sheffield likewise embrace grates and fireirons; also white-metal, and silver-plated articles.

The chief other localities are, Manchester and Glasgow, for machinery; fine tools are made at Warrington and Prescott, in Lancashire; needles and fish-hooks at Redditch, in Worcestershire; curriers' knives at Cirencester, in Gloucestershire;

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* The produce of the Dannemora mine (about 4000 tons annually) is almost wholly sent to Messrs Sykes of Hull, where it is called "Oregrund iron," a name derived from the port of shipment. The first marks are hoop L, which sells at £40 a-ton; and OO, and CL, £39. The best Russian mark, CCND seldom brings more than £20 a-ton.

fine fowling-pieces and pistols in the metropolis, where also the cutlery business is carried on extensively, though most of the articles bearing the name of a London vender are really made at Sheffield.

There are not many large capitalists in the hardware or cutlery manufactures. At Birmingham, most of the factories or workshops are on a comparatively small scale; and a large portion of the articles are made by artizans who work in their own houses. In Sheffield, this is even still more the case; a cutler being not unfrequently a journeyman one year and a master another, and conversely. In both places, the articles are generally purchased from the manufacturers by wholesale ironmongers, who dispose of them to retailers for home consumption, and to merchants for the export trade.

The extension of these branches of industry has been accompanied, or more properly has been occasioned, by improvements in the methods of production, which have lowered the prices of goods in a manner calculated to insure a continuance of prosperity to the manufactures by extending the number of consumers. This was more particularly the case between 1812 and 1832. Mr Babbage (*Economy of Manufactures*, § 148) has shown that during these 20 years, in a pretty extensive list of articles, the reduction in price on some—as anvils, candlesticks, and bed-screws, was from 40 to 45 per cent.; on others, as fireirons, and such like, it was 53 per cent.; on some kinds of locks, 80 per cent.; while, in a separate table, the reduction on several articles is shown to have considerably exceeded 100 per cent. None of the goods having ever been subject to duty, no means exist whereby to judge accurately of the extent of the iron-manufactures; but looking to what has been stated in the preceding article, the annual value of all sorts of iron, and hardware and cutlery articles produced in Great Britain, may be safely estimated at from £20,000,000 to £25,000,000.

The reduction in the cost of these commodities has occasioned a great increase in the number of foreign customers. The quantity and declared value of hardware and cutlery exported (exclusive of pig and wrought iron), was in 1820, 6697 tons, £949,085; in 1830, 13,269 tons, £1,410,936; in 1835, 20,197 tons, £1,833,043; in 1836, 21,072 tons, £2,271,313; in 1837, 13,371 tons, £1,460,807; in 1838, 15,295 tons, £1,498,327; in 1839, 21,176 tons, £1,828,521; and in 1840, 14,995 tons, £1,349,137: in 1841 the value was £1,625,191. About one-half is sent to the United States; the remainder to the colonies, India, Germany, and indeed most countries with which we have commercial relations. Of late, the exports have been somewhat checked by foreign competition, chiefly that of Belgium and Germany.

IRONWOOD, the product of an evergreen tree (*Sideroxylon*), remarkable for the hardness and weight of its timber, which sinks in water. There are several species found in the W. Indies, Africa, America, E. Indies, and Australia. The smooth ironwood tree (*S. incime*) is a native of the Cape of Good Hope.

ISINGLASS (Fr. *Colle de poisson*. Ger. *Hausenblase*. It. *Cola di pesce*. Rus. *Karluk*), a gelatinous substance chiefly formed of the dried sounds of fish; the best is made in Russia, and is obtained from the sturgeon. It should have neither taste nor smell, and be entirely soluble in warm water, but this is seldom the case, in consequence of the presence of some albuminous parts. It is employed in making medicinal jelly, blancmanges, court-plaster, and as a clarifier; when concentrated and dried, it forms a choice kind of glue.

IVORY (Fr. *Ivoire*. Ger. *Elfenbien*), the material composing the tusks of the elephant, is extensively used for knife-handles, mathematical and musical instruments, plates for miniatures, billiard-balls, and toys. The finest ivory is produced from the tusks of the male Asiatic elephant (*Elephas Indicus*) termed Dauntelah; and specimens weighing 150 lbs. are sometimes exported from Pegu and Cochin-China. In trade, however, they are seldom met with above 70 lbs. in weight; and do not weigh beyond 50 lbs. in Tiperah, which produces thousands of elephants, and from whence, as well as the adjoining province of Chittagong, the animals for the service of the East India Company are generally taken. The importations into this country of tusks are chiefly from Ceylon and the west coast of Africa; the total annual amount is about 5000 cwts., of which fully four-fifths are entered for home consumption. In London they are classed into six sorts:—*1st*, Those weighing 70 lbs. and upwards; *2d*, from 56 to 70 lbs.; *3d*, from 38 to 55 lbs.; *4th*, from 28 to 37 lbs.; *5th*, from 22 to 27 lbs.; *6th*, scrivelloes, consisting of the smallest teeth and fragments. In February 1842, the prices of these varied according to size and quality from £10 to £30 per cwt. They should be chosen large, straight, solid, and white; free from flaws or decay, and not very hollow in the stump.

The tusks or teeth of the seahorse and hippopotamus are also used as ivory. The latter, procured in Africa, are harder and whiter than those of the elephant, and do not turn yellow so soon. Fossil ivory from the tusks of the mammoth or elephant is that principally used by the Russian turners; it is found plentifully and in a high state of preservation in the Laichovian isles, and on the shores of the Frozen Sea.

IVORY-BLACK, a kind of animal charcoal, procured by the incineration or close distillation of ivory or the horns and bones of animals. It is used extensively in the arts.

J.

JACKWOOD, the timber of a species of BREAD-FRUIT-TREE.

JADE (CHINESE), a mineral referred by Jameson to the species *prehnite*, which is greatly valued in China, where it is termed *yu*. The finest is found in Yunnan; but the greater number are brought from Ele and other districts in Tartary. Its colour is greenish white passing into grayish green, and dark grass-green; it is semi-transparent and cloudy; fracture splintery; and splinters white. Sp. gr. 2·8 to 3·4. It is peculiarly difficult to cut; yet the Chinese take pride in fashioning it into various shapes, such as cups, saucers, bracelet clasps, buckles, and even animals; and it holds the chief place "in that world of precious trifles which the Chinese and Tartar ladies twine in their hair." Some of these articles require the labour of nine or ten years; but nothing can exhaust the patience of the yu-tsiang, or workers in yu. The gem presented by the emperor to Lord Macartney was of this stone, worked in the form of a sceptre.—(*Abel's Journey*, p. 132-134, &c.)

JALAP (Fr. *Jalap*. Ger. *Jalapp*. Sp. *Jalapa*), the root of (*Convolvulus jalapa*) a plant indigenous to Mexico. This root often weighs 50 lbs., but is divided into portions, and in commerce occurs in dried pear-shaped masses, which when good are hard, resinous, with a brown shining fracture, and a nauseous smell and taste. It is often adulterated with portions of the root of white bryony, but these may be distinguished by their lighter colour and less compact texture. Dried pears are also sometimes substituted for it. The excellence of jalap depends on the quantity of resin it contains, as this is the part which composes the well-known drastic purgative. The annual consumption in this country is about 50,000 lbs. It is chiefly imported from Vera Cruz.

JAMAICA. [WEST INDIES.]

JAPAN, an empire in the eastern extremity of Asia, consisting of a very large island, Niphon, about 800 miles long and 80 broad; three smaller islands, Kiusiu, Sikokf, and Jesso; and numerous islets. Area, 260,000 square miles. Population estimated at 25,000,000. Government, a pure despotism, but with this peculiarity, that two sovereigns are acknowledged,—the Dairi, a spiritual sovereign, whose capital is Miaco, in Niphon, pop. 500,000; and the Cubo, a temporal monarch, whose capital is Jeddo, also in Niphon, pop. 1,200,000. The Cubo, although he pays formal homage to the Dairi, is in possession of all the real power.

The islands are intersected by chains of mountains, several of which are volcanic, and some so lofty as to be covered with perpetual snow. Many of the valleys are fertile, though the soil is not generally so; but the ingenuity and industry of the inhabitants have rendered even the most barren spots productive. Rice forms the principal object of culture; wheat, barley, and other grains are raised in smaller quantities. The chief natural riches are those which belong to the mineral kingdom. The precious metals, particularly gold, exist in considerable quantity; and copper is found in such plenty as to form nearly the entire basis of the foreign commerce of the country; sulphur is abundant; and there are also ambergris, naphtha, pearls, with agates and other precious stones; iron is rare. The Japanese, in point of civilisation, are scarcely inferior to the Chinese; and they have made nearly equal progress in manufactures. The articles in which they chiefly excel, are lackered or japanned ware, porcelain, and silk, linen, and cotton cloths. The inimitable varnish employed in their lackered ware is obtained from the *rhus vernix*, or varnish tree, one of the most remarkable of their vegetable productions.

By the policy of its government, Japan is completely insulated from the rest of the world; and the people are wholly unacquainted with shipbuilding and navigation; having no vessels except fishing-boats. Considerable intercourse took place with the Portuguese in the sixteenth century; but, owing chiefly to religious animosity, the settlers were massacred; and since 1638 all foreigners have been jealously excluded, except the Chinese and Dutch. The Chinese trade employs about 10 junks, principally from Ning-po and Amoy, which make two voyages yearly; exchanging sugar, English woollens, and other commodities, for bar-copper, lackered ware, and dried fish. The Dutch trade is restricted to two vessels annually to Nangasaki, in lat. 32° 45′ N., long. 129° 52′ E., the chief city and port of Kiusiu; pop. 70,000. In this place they have a factory; but the residents are restricted to eleven only; and the ships are carefully watched, and their crews, during their stay in port, completely secluded from the natives on the small island of Djesima, close to the harbour. The vessels sail annually from Java about the 1st of July, and return in January. In 1839, the Dutch imports into Japan (as valued at Batavia) amounted to 224,745 florins (£18,729), principally consisting of sugar, cottons, and woollens. Their exports in the same year amounted to fl. 680,800 (£56,733); comprising 7085 peculs bar-copper, valued at fl. 513,675; 1190 bales camphor, fl. 113,050; with small quantities of linen and silk stuffs, japan wares, gauze and crape. These amounts are subject to little variation from one year to another; and the trade exhibits no symptoms of increase.

The principal measure of length is the inc = 6¼ English feet. The measures of capacity have not been determined. The weights are similar to those of China. Money accounts are kept in taels, mace, and candareens, as in China. The tael = 3½ Dutch florins = 6s. sterling. Most payments are made in silver ingots of various sizes, the values of which are determined by their weight. The Spanish dollar is valued at from 70 to 74 candareens.

JAPANNED OR LACKERED WARES. Those of British manufacture were originally only coarse imitations of the lackered toys of Japan and China; but the improvements of John Taylor and of Baskerville, who introduced the light and durable *papier maché*, have now given great elegance and extension to this branch of industry. The chief articles are trays, waiters, snuff-boxes, and similar things. Birmingham is the principal seat of the manufacture; but it is also prosecuted on a large scale at Bilston and Wolverhampton.

Upwards of £3000 worth of foreign lackered ware are annually imported, chiefly from China. That of Japan is the most highly prized; but it is brought only occasionally, and in very small parcels, from Batavia or Holland.

JASPER, a name given to those varieties of quartz in which the colours are red, brown, and black, and occasionally yellow or green, and which occur massive and disseminated with a fracture ranging from conchoidal to earthy, and lustre from glistening to dull. Jaspers are found in Scotland, Cornwall, and other places. *Striped* or *Ribbon Jasper* presents various shades of green, yellow, and red,—the finest being composed of equal and parallel layers of these colours. Chief localities, the Ural Mountains, Saxony, and Devonshire. *Egyptian Jasper* is generally of a brown colour without; but internally of a lighter hue, sometimes approaching to that of cream, surrounded with zones of brown, and sometimes mixed with black spots.—(*Jameson*. *Phillips*.)

JAVA, a noble island subject to Holland, situate in the E. Indian Archipelago, between lat. 6° and 9° S., and long. 105° and 115° E. Area, including the adjoining island of Madura, 45,724 sq. miles. Population 5,000,000. Java and Madura are divided into 20 provinces, or residences. Capital, Batavia, the seat of government of the Dutch E. Indies. The Dutch have had settlements on this island since 1619; but it is only of late years that it has been wholly subdued. It was taken by the British in 1811, and restored in 1816.

Java is divided nearly in its whole length by a range of mountains of volcanic origin, running almost E. and W., and varying in their elevation from 5000 to 12,000 feet. The W. part is that chiefly subjected to European influence, and is in general more level and capable of cultivation than the E. part, which is mountainous and wooded, though diversified with rich valleys. This part is cultivated upon the native system, and is occupied by princes tributary to Holland. The island is well watered, and, upon the whole, is the most fertile and most improved of all the Eastern Islands, though it does not excel in the finer spices. The mineral products are trifling: saltpetre is found; and salt is manufactured on the coast near Batavia. The most important natural production is teak, which would be largely exported were the trade not subjected to a rigid monopoly. The chief objects of cultivation are rice, coffee, and sugar, the produce of which has been very greatly increased of late years. Tobacco and a variety of other tropical articles are also produced; and immense sums have recently been expended by the government in attempts to grow indigo, tea, and silk; though, as respects the last two, with but little success. Edible birds' nests are obtained in great quantity from the rocks, called Karang Bolang, on the south coast. Arrack and sugar are manufactured extensively by the Chinese at Batavia. In other respects, manufacturing industry is nearly confined to the coarse fabrics woven by the poorer natives.

Few places in the world can exhibit such an expansion of trade as has taken place of late years in Java. This has arisen mainly from its great fertility, the low price at which labour can be procured, and the pains which the government have taken to turn these advantages to the best account by the formation of roads, and by encouraging the investment of European capital in the culture of the soil. Much is also due to the accessibility of its northern coast to the richest countries of Asia, and to the circumstance of its capital, Batavia, having been made the centre of the trade between Europe and the extensive settlements of the Dutch in the Indian Archipelago. The imports into the island, which, in 1827, including specie, amounted only to fl. 17,656,201, increased in 1839 to fl. 24,961,012; while, in the same period, the exports increased from fl. 14,868,227 to fl. 56,718,833 or £4,726,570. Of the goods imported in 1839, there were from Europe and America, fl. 16,172,865 (including fl. 10,875,108 from the Netherlands, and fl. 3,878,880 from Britain), chiefly consisting of linen and cotton stuffs, iron and copper wares, wines and spirits, woollen goods, provisions, and Levant opium; Eastern Archipelago, fl. 4,880,624, comprising principally wax, coffee, gambier, gold-dust, sandal-wood, cotton wool, oil, rattans, spices, béche-de-mer; China, Manilla, and Siam, fl. 1,607,614; Japan, fl. 680,800; Western India and Bengal, fl. 647,877. The leading exports in 1839 were: coffee, 757,476 peculs, of the value of fl. 23,860,499; sugar, 842,017 peculs, fl. 10,946,222; rice, 1,103,378 peculs, fl. 4,689,353; indigo, 1,191,636 lbs., fl. 3,574,909; Banca tin, 47,631½ peculs, fl. 2,381,577; nutmegs, 5026 peculs, fl. 1,508,014; tobacco, 2809 kodies, fl. 842,892; mace and cloves, fl. 712,707; birds' nests, 280 peculs, fl. 559,750: the chief other articles were, sandal-wood, yarns, rum, hides, copper-wares, pepper, and gold-dust. The principal places to which the shipments were made, were: The Netherlands, fl. 49,092,471; Eastern Archipelago, fl. 9,033,716;

China, fl. 2,093,882; Britain, fl. 1,938,506; America, fl. 957,523; France, fl. 832,737; and Australia, fl. 725,104. The Dutch trade is chiefly in the hands of the "Maatschappij," a commercial association formed in 1825, whose capital now amounts to fl. 97,000,000 (about £8,000,000), of which fl. 20,000,000 stand in the name of the abdicated king.

The principal ports, and those to which foreign trade is confined, are Batavia, Samarang, and Sourabaya, on the N. coast, where the sea being usually smooth, and the weather moderate, good anchorage may be found nearly at all seasons. The S. coast, owing to its complete exposure to the Indian Ocean, has no good harbours, and is but little frequented. The best in this quarter are Chelachap and Pachitan. Produce, especially rice, is shipped from most of these ports; but almost the whole external commerce of the island is concentrated at Batavia. About 105,000 lasts of shipping enter the ports of Java and Madura annually, embracing 80,000 Dutch, 10,000 British, and 15,000 lasts belonging to other countries.

Batavia, the chief port of Java, and indeed of the whole Eastern Islands, is advantageously situated at the mouth of the Jacatra, on the N.W. coast, in lat. 6° 10′ S., long. 107° E., at the bottom of an extensive bay. A circular range of islands shelters the roads, and ensures safe anchorage; but the water is shallow, and large vessels lie about three miles from shore. The climate is sultry, and varies little throughout the year. Fahrenheit ranges from 72 to 96; the rainy season is generally from October to March, when westerly winds prevail; the dry from June to October, the period of the E. monsoon. The old town was proverbially unhealthy, and though of late years rendered more salubrious by the improvement of the canals, and the demolition of several streets, is inhabited only by natives and Chinese; Europeans, though they still transact their business there, have their residences at Weltevreeden, a new town, several miles inland, where are likewise the government establishments. Batavia is the centre of an extensive commerce with Europe, India, China, and America. Besides exchanging the produce of Java for the imports from these countries, it is an entrepôt for the productions of all the Eastern Islands and JAPAN.

MEASURES, WEIGHTS, MONEY, &c.

Measures and Weights.—The ell = 27¼, and the foot = 12·36 Imp. inches.

The kanne, liquid measure, = 91 Imp. cubic inches; and 33 kannes = 13 English galls. old measure, or 10⅚ Imp. galls.; a leaguer of arrack of 396 rands = 160 English wine galls., or 133⅓ Imp. galls.; a leaguer of wine is 360 rands.

The ordinary weights here, as well as throughout all the Eastern possessions of the Dutch, are those of CHINA; the pecul, however, instead of 133⅓ lbs. avoird., is reckoned at 125 Dutch troy lbs. = 135 lbs. 10 oz. avoird., but commonly estimated at 136 lbs. avoird. Grain is sold in large quantities by the coyang of 3300 Dutch troy lbs. = 3581 lbs. avoird.; in small quantities by the timbang of 5 peculs, or 10 sacks. The kulack = 7½ catties; and the last contains 46 measures, each of 5 gantons.

Money.—Accounts are stated in Netherlands florins or guilders, each of 100 cents; the florin is a silver coin = 1s. 8d. sterling. In 1828, a bank was established at Batavia, with a capital of fl. 2,000,000; but it has lately suspended payment.

A treaty with Great Britain was concluded by Holland in 1824, which contained provisions for regulating the intercourse between the subjects of the two governments in the East; but its terms are alleged to have been violated by the Dutch authorities in Java, as well in the higher rates they have since imposed on British imports, as in the custom-house valuations on which these rates have been founded. An account of this treaty is given under the head NETHERLANDS.

JEAN, a thick, strong, twilled cotton fabric, used for stays, jackets, trousers, and similar articles.

JERQUING, the search of a ship performed by a custom-house officer (called a jerquer), to ascertain if there are any unentered goods concealed.

JERSEY, GUERNSEY, ALDERNEY, and SARK, small islands in the English Channel, off the coast of Normandy, subject to the British crown; having been originally part of the patrimony of the Norman kings. Area of the whole, 112 sq. miles. Population, in 1841, 76,094. These islands have local legislatures, with governors appointed by the crown; their political constitution being separate from that of the United Kingdom.

Jersey, the principal island, situate 13 miles W. of the coast of France, is 12 miles in length, and about 7 in breadth. The surface is undulating and fertile, and chiefly laid out in pasturage and orchards; apples, cider, butter, and cows, forming, with oysters and potatoes, the principal exports to England, in exchange for coals and manufactures. The trade in other respects is considerable. Nearly 80 vessels (8000 tons) are employed in the deep-sea cod-fishery, the produce of which is mostly sent to Brazil; and the Jersey merchants, besides carrying on an active intercourse with France, import largely wine and brandy from Spain, Portugal, and Sicily, and sugar and coffee from Brazil, which they exchange in the N. of Europe for corn, timber, hemp, and tallow. Shoes are extensively made from French leather, and about 13,000 pairs annually sent to British America. Shipbuilding is carried on to a great extent, owing to foreign timber being allowed to be imported free of duty, while, at the same time, the Jersey vessels are entitled to the privileges of British-built shipping; and the island now possesses about 250 ships (25,000 tons), exclusive of nearly 500 fishing-smacks. The chief town and port is St Helier, from whence steamers communicate with Southampton and Weymouth. Revenue of the island about £15,000, and debt £60,000. Exchange 8 or 9 per cent. in favour of England, or £1 sterling = £1, 1s. 8d. Jersey currency nearly.

Guernsey, about 18 miles N.W. of Jersey, is 9 miles long, and 6 broad. It is not equal to Jersey in point of fertility, but its productions are similar. The island possesses about 100 vessels, burden 10,000 tons, which are chiefly employed in the carrying trade with Spain, Portugal, Brazil, and N. of Europe. Before the introduction of the bonding system into Britain, it was much used as a depôt for wines and other goods; and an extensive illicit trade was carried on, which has now, however, wholly ceased. The only town is St Peter's Port.

Alderney, a dependency of Guernsey, is 3½ miles long, and ¾ mile broad. It is chiefly celebrated for its small breed of cattle. It possesses no good harbour. *Sark* is another small island dependent on Guernsey.

All articles of the growth, produce, or manufacture of these islands are admitted into this country on payment of the duties (if any) imposed on similar British commodities; but their trade is subjected to certain regulations intended to prevent contraband traffic. An account of these will be found under the heads CUSTOMS REGULATIONS and NAVIGATION.

JET, or *pitch coal*, a species of coal of a deep black colour, with a brilliant resinous lustre. It is found in detached fragments in the amber mines in Prussia, where it is called black amber; also in Germany, France, and Spain. It is used as fuel; but the finer and harder pieces are worked into trinkets. Sometimes also it is used as an ingredient in varnishes and cements.

JETTISON OR JACTURA, is the throwing overboard any part of a vessel or her contents, for the safety of the remainder, by enabling her to weather a storm or get off a shallow. When such an act takes place, the several persons interested divide the loss among them. [AVERAGE.]

JOANESE, OR JOE, a Portuguese gold coin, worth about 36s.

JOCH, a German land-measure, containing 6889 sq. yds.

JOINT-ADVENTURE, a shipment made by two or more parties on joint-account. [PARTNERSHIP.]

JOINT STOCK COMPANIES are a species of partnership to which all the laws affecting ordinary private companies apply, except in so far as they are incompatible with the nature of a public joint stock company. This is the position of the law in general as to joint stock companies, but in practice they are in almost every case materially distinct from private partnerships, by the special privileges respectively conceded to them. The leading distinction between joint stock and private companies is this, that, while the latter trade under the name of partners or presumed partners, and in all their transactions present to the public certain individuals as the parties principally liable, the former trade under a descriptive name, on the credit of their stock, and without any individuals appearing as responsible for the engagements. Yet, by the mere creation of a joint stock company and the private agreement of the undertakers, the relief from personal responsibility cannot be accomplished. Unless where there are some of the special privileges described below, the general law of partnership still holds, so that each member is responsible for the debts of the whole; though in Scotland it is doubted whether this responsibility may not be obviated by holding out to the public that they are to trust to the capital only, and not to the individuals.

The next peculiarity of a joint stock company, and one that is essential to the existence of such a body, is, that the shares are transferable as articles of commerce, without the consent of the partnership. How far this can be accomplished voluntarily by the members is a doubtful point. Before the repeal of the Bubble Act, by 6 Geo. IV. c. 91, the creating transferable stock without proper authority, was one of the offences against which the act was aimed; but at the same time, whenever there was any regulation for checking unlimited transferability, such as, that the purchaser of the stock must sign the articles, or must be approved of by the directors, the courts were accustomed to sanction the proceeding; and it may be questioned if the transferability of stock can now be in any form suppressed. It is another general characteristic of a joint stock company, that it pursues and defends in the name of some office-bearer chosen for the purpose; but this is a facility which it can never possess except through the means by which such bodies acquire special privileges.

One of these means may be a charter of incorporation from the crown; but as this is an expensive and cumbersome arrangement, and gives but limited privileges, it is seldom had recourse to by an ordinary commercial association [CORPORATION]. Another method is by obtaining what is generally called a "private bill," but more properly a public local act. The preliminaries for obtaining such a measure are detailed under the head COMPANY. Wherever it is in contemplation to compel individuals to part with their property at a just valuation, or to exact the price of the company's services in the form of a tax, an act is necessary. Hence an act must always be obtained for a railway, canal, harbour, gas, or water company. Since the passing of the statute by which the crown is authorized to issue letters patent to companies (abridged below), local acts have ceased to be necessary for mere commercial joint stock companies.

Shares in such companies may become the subject of ordinary commerce, and will be held as transferred where there is evidence of a mutual consent and transfer, independently of any fixed regulations by the company as to the form of proceeding. The managers of a joint stock company being in the position of trustees, are bound to adhere to the original objects of the company. In a late case in Scotland where a company was organized for the purpose of carrying goods and passengers between Leith and Australia, the managers, who were empowered to export and import goods, were found not entitled to take consignments of goods guaranteeing the price on *del credere*, or to trade at ports not intermediate between Leith and Australia.—(Maxton *agt.* Brown, 17th January 1839.)

Deed of Settlement.—The regulations of a joint stock company are generally embodied in the deed of settlement. This instrument "constitutes trustees of the partnership property, directors of the partnership affairs, auditors of its accounts, and such other officers as the objects of the society require, and contains covenants for the performance of their respective duties, which are specifically set out, as are those of the other partners or shareholders; it also defines the number of shares, the power and method of transferring them, and of calling for the instalments required to be made thereon; the mode of convening general meetings of proprietors, their rights when convened, and a variety of other rules suited to the exigencies of that particular undertaking."—(*Smith's Mercantile L.*, 58.)

Companies under the Patent Act (viz. 7 Wm. IV. & 1 Vict. c. 73).—Letters patent may be granted under the great seal to individuals and their representatives, empowering them to sue and be sued through one of two registered officers, and limiting the amount of their individual responsibility to a certain sum per share. The company must be constituted by a deed of partnership, containing its designation, object, and place of business, with the designations of the members, and appointing two officers to sue and be sued. Within three months after the date of the letters patent a return of these particulars, and of the shares (as designated by their numbers) held by each individual, together with the extent of responsibility of each, must be made—in England or Ireland to the Enrolment Office of the Court of Chancery, in Scotland to the Register-house; and when transfers of shares are made a similar notice must be sent within three months. No person is entitled to a share of profits unless he be registered as a member, and every person is held to remain a member, and continues to be responsible as such, until a return of his ceasing to be so is registered. When responsibility is limited to a certain sum per share, no action can be brought against a member for a larger sum than the unpaid balance of his subscription. When application is made to the crown for such letters patent, it is referred to the committee of privy council on trade and plantations; and before the letters are granted notice must be given by the applicants, in the London Gazette and in some local paper three times, at intervals of a week. [COMPANY. PARTNERSHIP.] —(*Collyer on Partnership*, 722-770. *Smith*, ut supra. *Burton's Manual*, 399-402.)

JOURNAL. [BOOK-KEEPING.]

JUJUBES, a fruit of the plum kind, produced in the south of Europe, Persia, and other countries. The Asiatic is much darker than the European, which is of a reddish yellow colour. The best are fresh, plump, and well dried.

JUNIPER BERRIES (Du. *Geneverbessen.* It. *Cocole di Ginepro.* Ger. *Wacholder-beeren.* Fr. *Baies de Genièvre*), the well-known fruit of the *Juniperus communis*, an evergreen shrub, growing on heaths and hilly grounds in all parts of Europe. They are to be chosen fresh, plump, and of a strong taste. These berries have stimulating and diuretic properties, and are an article of the materia medica, but are chiefly used in distilleries in this country and Holland for flavouring gin or geneva. Though indigenous in Britain, large quantities are imported from the Continent, particularly from Italy and Holland.

JUNK, or *tchevu*, a vessel of a grotesque form, used in the coasting and foreign trade of China, Siam, and Annam. The junks vary greatly in size; some exceeding 1000 tons. The best are made at Bankok, in Siam.

The immutable policy of the Chinese government appears to have early fixed the form of the junks, and now prohibits any change, under penalty of paying the high duties exacted from foreign ships. They are very much raised at both ends; the fore part is an even surface like the stern, and there is no keel. The masts (of a single spar each) are from two to four in number, and of very unequal dimensions; the mainmast being greatly larger than any of the rest; and on each mast there is commonly a single square sail, made of split bamboos, and stretched by poles; in some cases it furls and unfurls like a fan. Pumps are not made use of; the cables and rigging are of rattan or coir, and the anchors of ironwood, having the flukes occasionally tipped with iron. The hold is broad, though not deep, and the bottom almost completely flat. There is only one deck, but the hold is divided into about a dozen compartments, each belonging to a distinct proprietor, and separated from the others by planks, caulked with a cement consisting of lime and oil mixed with a few scrapings of bamboo. This arrangement, though it must diminish the stowage, has the advantage of preventing water from damaging the cargo in general, and even from endangering the safety of the vessel. The junks seem to have been first contrived with the view of plying in bays and rivers, for which they are well adapted. But when steered into the ocean, they do not take sufficient hold of the water to withstand those dreadful tempests which render the seas of China perhaps the most perilous in the globe. The voyages, however, being always undertaken during a favourable monsoon, the Chinese set the head of their junk towards the quarter they are bound to, and blunder on with much less damage than might be expected.

JUREMA BARK, an astringent substance, the product of the *acacia jurema*, a native of Brazil.

JUTE, a kind of hemp, consists of the fibres of an annual plant (*Corchorus olitorius*) extensively cultivated in Bengal. It is used for cordage in India, and is now imported in considerable quantities into this country. The gunny bags in which sugar is brought from India are composed of this material.

K.

KEEL, a flat-bottomed vessel used on the Tyne to carry coals. It contains, on an average, 8 Newcastle chaldrons = 15½ London chaldrons = 21 tons 4 cwt.

KEG, a wooden vessel or barrel containing 4 or 5 gallons.

KELP, an alkaline substance formerly prepared in large quantities on the N. shores of Scotland, by burning seaweed. [BARILLA.]

The kelp trade existed about two centuries; but it was not till the year 1807, when the attention of the English manufacturers was drawn to it, that it became of importance. The cost of carting and burning the material, and lading it in boats, varied from 30s. to £3 a-ton in different places. The whole expenditure, before the kelp reached the consumer, averaged £4, and the prices obtained were generally £18, and sometimes even £22. These high rates only lasted till 1810, when the price gradually fell to £11, and subsequently to £8. Kelp ceased to be made at a profit when the duty was removed from salt in 1817. The number of hands employed has been variously estimated at from 50,000 to 100,000; but the occupation lasted only during a few weeks in summer; and having earned enough for subsistence, the peasant could remain idle during the rest of the year. The Highland estates became in this way burdened with a great surplus population, whose removal by emigration has been since pressed with much force upon the government. —(*Par. Report on Highland Emigration*: 1841.)

KENTLEDGE, pigs of iron used for ballast.

KERMES, or *Coccus ilicis*, an insect found in large quantities on a small species of oak in many parts of Asia and the south of Europe, particularly Spain. It contains a red colouring principle; and, until the discovery of the cochineal insect, was the only substance used in dyeing scarlet from the period when the shell-fish producing the Tyrian purple of the Romans ceased to be employed. It is still used in Barbary and the Levant for dyeing the scarlet caps so much worn in those countries. In Europe it is almost entirely superseded by cochineal.

The same term is likewise applied to a factitious sulphuret of antimony, commonly met with in the form of a brown-red powder.

KERSEYMERE, a thin stuff generally woven plain from the finest wools, and made chiefly in the west of England. *Kersey* is a very coarse stuff, usually ribbed, and woven from long wool. It is chiefly manufactured in the north of England.

KILLOW, a Turkish corn-measure, varying in different places. [TURKEY.]

KILOGRAMME, a French weight, equal 2⅕ lbs. avoird. nearly.

KILOMETRE, a French itinerary measure, equal 1093⅗ yards, or about 5 furlongs.

KINGWOOD, a fancy wood, the product of a small tree found in Brazil, the botanical name of which is unknown. It is extremely hard, of a dark chocolate colour, with black veins. It is chiefly employed for small cabinet-work.

KINO, an astringent gummy substance, of which there are several kinds. Much uncertainty exists regarding the origin of this commodity. East Indian kino is said to be the produce of the *Butea frondosa* (Roxb.), a tree or shrub common in that part of Asia; African kino is generally stated to be derived from the *Pterocarpus erinaceus* (Linn.), a native of Gambia; the Australian variety is procured from the *Eucalyptus resinefera* (White); and the American is said to be the juice of the *Coccoloba uvifera* of the West Indies. Kino generally occurs in shining grains, of a rich ruby-red colour, readily pulverizable, and nearly all soluble in water and in alcohol. In India it is used for communicating a nankeen colour to cotton. It is also an article of the materia medica.

KIRSCHWASSER, an alcoholic liquor, made in Germany from CHERRIES.

KISSMISSES, the small kind of grape from which Shiraz wine is obtained. It is produced in Persia, from whence considerable quantities are sent to India when dried into raisins. Their price is regularly quoted in the Indian prices current.

KNIVES (Du. *Messen*. Fr. *Couteaux*. Ger. *Messer*. It. *Coltelli*. Por. *Facas*. Rus. *Noshi*. Sp. *Cuchillos*). [IRON MANUFACTURES.]

KNOT, in navigation, the division of the LOG-LINE, corresponding to one mile.

KORSEC, a Polish corn-measure, equal, at Warsaw, to 3⅓ Imp. bushels.

KREOSOTE, or CREOSOTE, a peculiar liquid of recent discovery, which is obtained by a complicated process from wood-tar. When pure, it is colourless and transparent, of a burning caustic taste, and a strong penetrating odour, resembling that of smoked meat. Sp. gr. 1·037. It burns with a very sooty flame. Kreosote possesses powerful antiseptic properties. Meat and fish are preserved after having been brushed over with it and dried in the sun; and it appears to be the principle to which the antiseptic powers of wood-smoke and pyroligneous acid are due. Its action upon the animal system is energetic. In medicine it is employed externally for toothach, cancer, &c.; and internally as a stimulant.

KREUTZER, a German coin, worth about one-third of a penny.

L.

LABDANUM, a resinous substance, obtained from a small shrub (*Cistus Creticus*), which grows in Crete and Syria. It is used in the preparation of plasters. The best is in dark-coloured masses, of a soft consistence, becoming still softer on being handled. It is greatly adulterated by the addition of black sand.

LABURNUM, a well-known tree (*L. Cytisus*) which, when of sufficient dimensions, is well adapted for cabinet-work. It possesses an oily property, which fits it for pins of blocks, and cogs in mill-work, as its unctuous nature prevents it from being abraded; indeed, wherever any very hard and compact timber is required in small pieces, there are few superior to it. Its natural colour, too, is good; and it may be rendered almost black by the application of lime-water.

LAC, in Hindoo numeration, denotes 100,000. A lac of rupees is, therefore, nearly £10,000 sterling.

LAC (Arab. *Laak*. Du. *Gomlac*. Fr. *Lacque*. Ger. *Lack*. Hind. *Lak'h*. It. *Lacca*. Por. *Laca em páos*), a resinous or waxy substance, deposited by an insect (*Chermes lacca*) on various kinds of trees in the East as a defence for its eggs, and to supply food for the maggot in a more advanced state. It is known under the names of stick-lac, seed-lac, lump or cake lac, and shell-lac. *Stick-lac* is the substance in its natural state before its separation from the twigs which it incrusts, being gathered before the insects have left their cells; and the best is of a red purplish colour. According to Mr Milburn, it may be had in almost any quantity; the only trouble in procuring it being to break the branches and carry them to market. *Seed-lac* is the stick-lac separated from the twigs, appearing in a granulated form, and deprived of part of its colouring matter by boiling: this is seldom imported, it being almost all manufactured into shell-lac in India. *Lump-lac* is the seed-lac melted and formed into cakes. *Shell-lac*, the most common form in which it is known in Europe, is the substance liquefied, strained, and formed into thin transparent laminæ. The value is estimated according to its transparency and lightness of colour. The best is of a bright orange; the liver-coloured is inferior; and that which is very thick, dark, or speckled, should be avoided. The quality of shell-lac has of late years been greatly improved; and the quantity imported is much increased. In the East it is used for making trinkets. In this country it is the basis of the best sealing-wax, and is also used to form ink and varnishes. It is now likewise employed extensively in hatmaking.

Lac is an article of commerce in Bengal, Siam, Annam, Ceylon, Pegu; and, according to Mr Crawfurd, the insect exists in most of the forests of the Indian Islands. About 3,000,000 lbs. of shell-lac are annually imported, wholly from Bengal,—nearly one-half of which, however, is re-exported to Italy, Belgium, Russia, Germany, and other parts of the Continent.

LAC-DYE, LAC-LAKE, are two preparations of the colouring matter of stick-lac: the former is by far the most valuable. They are imported in small square cakes, similar to those of indigo. They should, when broken, look dark-coloured, shining, smooth, and compact; and when scraped or powdered, of a bright red hue. They are used as red dyes for some purposes, instead of cochineal. Lac-dye is a valuable dye-stuff, but it still admits of considerable improvement. Upwards of 1,000,000 lbs. are annually imported, only from Bengal,—nearly one-half of which is again exported to Italy, Germany, and other parts of the Continent.

LACE and BOBBIN-NET MANUFACTURES. The origin and early history of the lace-manufacture are involved in obscurity. It is supposed to have been known to the ancients, and to have been introduced into this country, or at least materially improved, by Flemish refugees who settled in the counties of Buckingham and Bedford. The original fabric, and that which is still in highest esteem, is called *pillow lace*,—being worked by the hand upon a pillow or cushion, stuck, according to the pattern, with pins, around which linen or silken threads are twisted and woven off a series of bobbins, or small cylindrical pieces of wood. The manufacture of this kind of lace is carried on in several of the midland counties, in the west of England, and at Honiton in Devonshire, where the finest British lace is made. On the Continent its chief seats are Brussels and Mechlin in Belgium,—places which have long maintained a pre-eminence in this manufacture; and Valenciennes, Alençon, Caen, and Bayeux in the north of France. But lacemaking by the hand has now greatly declined, owing to the extreme cheapness of that made by machines, called bobbin-net,—the manufacture of which has of late years risen into high importance both in this country and in France.

The bobbin-net trade is a branch of the cotton manufacture; the net being almost invariably formed of that material. It originated in successive improvements and alterations on the stocking-frame, by which it was adapted to the weaving of lace; though it is deserving of notice that it could have had no existence but for Samuel Crompton's invention, the mule [COTTON MANUFACTURE] which spins yarn suitable for that delicate fabric. The application of the stocking-frame to lacemaking was first attempted by a frame-work knitter of Nottingham, named Hammond, about 1768; but it was not rendered completely successful till after improvements by John Heathcoat,* also of Nottingham, for which a patent was secured in 1809. His improvements were of so important a character as to entitle him to be justly considered the inventor of the lace-frame, and the father of the bobbin-net manufacture. The lace-frame was simplified in various ways during the continuance of the patent; and, on its expiry in 1823, so much ingenuity was brought to bear upon this machine, that its speed was increased twelvefold, and it was fitted to be propelled by steam and water power. Means were besides discovered for making the net into slips of various widths,—some as wide as 4 yards,—instead of only one broad piece, as at first; and likewise to work various ornaments into it by the aid of machinery, which, in point of complex ingenuity, far surpasses that used in any other branch of human industry. "One of Fisher's spotting-frames," according to Dr Ure, "is as much beyond the most curious chronometer in multiplicity of mechanical device, as that is beyond a common roasting-jack." The combined effect of these improvements is, that fabrics, for which £5 were paid during the existence of Mr Heathcoat's patent, may now be purchased for 2s. 6d.

The growth of the bobbin-net trade after 1823 was as rapid as that of the cotton manufacture after the nullification of Arkwright's patent. But a vast amount of capital was sunk during the development of the improvements on Mr Heathcoat's frame:—out of 5000 machines, the 3500 first constructed at a cost of £2,000,000, were, in the course of a few years, by this cause alone, depreciated to one-tenth of their value,—to say nothing of the number of frames destroyed during the Luddite crusade against machinery in the years 1811-12. Much distress was also occasioned in the same period, by the decline of profits and wages, consequent on the excessive amount of capital and labour which flowed into the trade.

The great seat of the bobbin-net trade in this country is Nottingham; but it is also extensively prosecuted at Leicester, Derby, Tiverton, and the west of England. We possess no authoritative estimate of its amount more recent than 1836. In that year the cotton yarn (mostly Nos. 180, 190, and 200) used in it required 1,850,000 lbs. of Sea-island wool, worth £185,000; and silk was consumed of the value of £25,000; making the total worth of the raw material £210,000. The gross return amounted to £2,212,000; consisting of plain net, £660,000; quillings, £492,000; and embroidered goods, £1,060,000. The sales for home consumption were in plain nets, about £320,000; quillings, £210,000; embroidered goods, £580,000; total, £1,110,000. The foreign trade took off about £340,000 plain nets; £282,000 quillings; and £480,000 figured goods; total, £1,102,000. The progress of our foreign trade since 1836 cannot be stated with precision, as bobbin-net does not appear under a separate head in the government returns; but its amount is not supposed to have increased. The exports are chiefly made to the United States, Germany, Belgium, France, the British Colonies, and South America.

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* Mr Heathcoat removed to Tiverton soon after he had obtained his patent, owing to the riotous attacks made on his lace-frames at Nottingham,—that town having become, through the ignorance of the workmen, the head-quarters of an extensive conspiracy against machinery, known by the name of Luddism, in the counties of York, Lancaster, Nottingham, Derby, and Chester; and which was only put down after many men had atoned by their lives for their acts of outrage. Mr Heathcoat began life in humble circumstances, and made his fortune by his happy invention; and, being at once a man of talent and of business, he now fills the honourable station of member of parliament for Tiverton.

The following are the principal kinds of lace usually met with in trade:—

British Lace.—Nine sorts may be distinguished:—1*st*, *Quilling Nets;* these differ in width from a small fraction of an inch up to ¼ yard; which several widths are also sometimes denoted by the number of meshes from selvage to selvage. The criteria of good quality are—perfect freedom from any fibrous appearance on the substance of the net; clearness and distinctness in the meshes; absence of knots and rags from the selvages, and of any unpleasant stiffness from the face generally. 2*d*. *Bobbin* or *Piece Nets*, to which the same observations apply, may be had of various widths, from ⅝ to ⅞ yard. 3*d* and 4*th*, *Tattings* and *Pearls* only differ from the preceding in width; tattings vary in width from a quarter to the sixteenth of an inch; pearls are still narrower: both are used for the edging of nets. 5*th*, *Gased Lace*, or Urling's Lace, is a quilling net figured,—having a threadlike appearance communicated to it by being passed rapidly through gas-flame, by which the fibrous parts are destroyed, without injury to the net: it is merely a showy, low-priced substitute for—6*th*, *Pillow* or *Thread Lace*, the only legitimate lace, and, taking durability into account, perhaps the cheapest: it occurs either white or black. 7*th*, *Silk Net* is either in quillings or in piece,—the latter, when tolerably undressed, being sometimes called *tulle:* in each the meshes ought to be free from gum (with which it is stiffened), the selvages free from rags, and the face from knots and other imperfections. 8*th*, *Blondes* occur either black or white; these again are either real, the best of which are imported from France, or in imitation: each kind may be had of any width below ½ yard for trimmings, and of greater sizes for full-dress garments. 9*th*, *Veils* should be perfectly free from stiffness; and, if figured, the objects should be neatly finished; the net fine; and, when intended to be black, not of a blueish tinge. In selecting lace, nets, or veils, the more rapid the observation the better, for, the longer the eye is engaged on the meshes, the less capable it is of accurate discrimination.—*Perkins on Haberdashery*, p. 121.

Foreign Lace.—The most valuable is *Brussels*, the peculiar qualities of which are delicate fineness, and a great elegance and variety of design. It is made of flax grown near Hal and at Rebecque; and the spinning is performed in darkened rooms, with a beam of light admitted only upon the work through a small aperture. The best specimens are produced by the houses of MM. Tardent-Pirlet, and Ducpetiaux of Brussels. The second in rank is *Mechlin;* but several other kinds are likewise distinguished for great richness and elegance.

Lace is imported from France in considerable quantities, but, owing to the heavy duty, almost wholly in an illicit manner, the charge for which is stated to be only from 5 to 10 per cent. Much of this smuggled lace, however, is merely British lace with French embroidery.

LADING, BILL OF. [Bill of Lading.]

LAMP-BLACK, a substance obtained by burning the impurities left in the precipitation of tar and pitch, and collecting the particles carried off and deposited in the form of soot. The finest kind is procured by collecting the smoke from a lamp which supplies more oil than can be perfectly consumed. Its quality depends on its lightness and fulness of colour. It is used in the arts, particularly in the manufacture of printers' ink.

LAMPREY, a cartilaginous fish (*Petromyzon marinus*) resembling an eel, common during spring and summer in some of the rivers on the south coast of England, particularly the Severn, which it ascends from the sea for the purpose of depositing its spawn. It is found in smaller numbers in several of the Irish and Scottish streams. The potted lampreys of Worcester are in high estimation.

LANCEWOOD, the timber of a tree (*Guatteria virgata*) indigenous to Jamaica, and which, though not of very great size, is highly valued from its exceeding even ash in lightness, strength, and elasticity; hence, it is admirably calculated for shafts to carriages, handles to spears, and similar purposes. It is neither so close-grained nor so hard as box, but it turns well; in colour it is lighter than box.

LAND-TAX or CESS, a British impost on rent, which became a permanent source of revenue in the end of the 17th century, superseding the occasional subsidies of the feudal government. It proceeded on valuations of the rental of the kingdom, made in Scotland in 1674, and in England in 1692; on which last a tax of 1s. a-pound was calculated to yield a clear annual revenue of £500,000. These valuations have ever since furnished the canons of assessment. The tax was granted by parliament from year to year, at various rates, until 1798, when it was fixed permanently at 4s. a-pound (38 Geo. III. c. 5, and c. 60). The object of rendering the tax perpetual was to facilitate the raising of money by its redemption or purchase by the proprietor of the land; and various provisions were made for this purpose, which, however, have been since modified, particularly in 1811 and 1812, when the management was transferred from special commissioners to those for the affairs of taxes. The assessment is levied under the authority of local commissioners; but by a late act (1 & 2 Vict. c. 58) the powers relating to its redemption are transferred to the Treasury.

We possess no very recent account of the amount redeemed: but a report made by the commissioners in May 1828 states, that down to that time the number of sales effected had been 3593, the value thereof being £1,438,513; and the total amount of tax redeemed thereby could not be fairly estimated at less than £63,100 per annum. The sum remitted to the Exchequer in the year 1840 was, in England, £1,145,082; in Scotland, £36,201; total, £1,181,283. In the last-mentioned country the tax was limited by the Act of Union in 1707 to £48,000 (deducting all expenses); and in 1798 it was fixed at £47,954, 1s. 2d.

LANDWAITER, a custom-house officer, whose duty it is to take an account of goods imported.

LAPIS LAZULI. [AZURE STONE.]

LARCH. [PINE.]

LARD, the fat of the omentum and mesentery of the pig. When properly freed from membranes and blood by being picked, kneaded in water, melted and strained through linen, it should be white, pultaceous, in thin layers, somewhat tough, without smell, of a sweetish taste, and melting at 100° Fahr. It is to be kept in a cool dry situation, in vessels with a cover, luted on with linen, smeared with white of egg and powdered lime; but notwithstanding every precaution it at length becomes rancid. Lard is employed in the formation of ointments, plasters, liniments, and for other medical purposes. It forms an article of export from Waterford, Limerick, and other places.

LAST, a metrical term, of German origin, used to express a load, burden, or quantity of certain articles, commonly of a bulky nature. In this country the last of corn is 10 quarters or 29·078 French hectolitres; on the Continent, however, it is generally rated higher. The last of herrings, tar, pitch, potash, cod-fish, meal, soap, and other articles, is commonly reckoned at 12 barrels (12 Ch. II., 38 Geo. III., &c.); but the last of gunpowder is 24 barrels or 2400 lbs. The Prussian ship-last is 4000 Prussian lbs. = 4124 lbs. avoird. At Dantzic the last of timber is 80 cubic feet.

LASTING, a woollen stuff used in making women's shoes.

LATHS (Ger. *Latten*), long thin pieces of wood nailed to the rafters of a wall or roof to receive the plaster.

LATTEN, a plate or sheet of iron, tinned over.

LAUDANUM, a soporific tincture made from OPIUM.

LAVENDER, a plant (*Lavandula spica*) yielding the well-known oil and distilled waters which bear its name. Both of these are obtained in greatest proportion from the flower-spikes which have been gathered in dry weather before they are fully expanded. Lavender is extensively cultivated near London, particularly at Park Place, near Henley-on-Thames. The English oil is preferable to that imported from the Continent.

LAWN, a fine sort of cambric. It is made in Scotland and Ireland, but the best is imported from France.

LAY-DAYS, a certain number of days during which a merchant is entitled to delay a vessel in loading and unloading. [AFFREIGHTMENT. DEMURRAGE.]

LAZARETTO, a name given to those enclosed buildings, common in the Mediterranean ports, in which ships' crews, passengers, and goods arriving from places where the plague is known to prevail, are lodged for the performance of QUARANTINE.

LEAD (Fr. *Plomb*. Ger. *Blei*. It. *Piombo*. Du. *Lood*. Por. *Chumbo*. Rus. *Swinetz*. Sp. *Plomo*), a soft and flexible metal, of a pale livid gray colour, easily malleable, but slightly tenacious and not sonorous. Sp. gr. 11·35. It melts at 612° Fahr.,—a much lower heat than affects most other metals. Exposed in the open air, it soon tarnishes; but the oxidisement never proceeds far. Water when pure does not act upon it, though it greatly facilitates the influence of the external air.

The lead mines of Britain are of great importance; and those of Derbyshire are said to have been wrought prior to the Roman invasion. The most productive at present are situated in Northumberland, Cumberland, Durham, Derbyshire, Flintshire, Snafield in Man, and at Leadhills in Scotland. The metal is rare in Ireland. Nearly all the produce of the British mines is obtained from the sulphuret called *galena*, in which lead is in combination with sulphur in the proportion of 86 parts of metal to 14 of sulphur. The ore, after having been washed and picked, is roasted in order to disengage the sulphur; then mixed with fuel, it is placed in the smelting furnace. When tapped from this it runs down a straight channel technically called the *sow*, from which branch off on each side some smaller channels named *pigs*; in these it cools, and from them receives the appellation of *pig lead*.

Lead is of common and extensive use in the arts. Alloyed with tin, in different proportions, it forms *solder* and *pewter*; and with antimony it constitutes *type metal*. Combined with oxygen it forms *massicot*, a protoxide of a pale yellow colour; *litharge*, also a semi-crystalline protoxide, obtained in separating silver from lead ores, enters largely into the composition of flint-glass; *minium*, or *red lead*, a deutoxide, extensively used as a paint, and also in the manufacture of flint-glass: the carbonate of lead, or *white lead*, is a dense white powder, commonly employed as a pigment; the chromate of lead, of a beautiful yellow colour, is also much used as a pigment; and the acetate of lead, called *sugar of lead*, is employed for various purposes.

The pure metal is used for numerous machines and utensils; but its chief employment is in the form of sheets, pipes, and shot. *Sheet-lead* is melted and cast; the thickness of the sheets being frequently reduced by means of heavy rollers worked by steam-power. The sheet is of different thicknesses, but always weighs 9 cwt., so that its length and breadth will be greater in proportion to the diminution of its thickness. In trade, the sheets are described as being of so many pounds weight to the superficial square foot. *Lead pipes* are sometimes made in a rough way by bending sheet-lead over a mandrel, and soldering the edges together; but more commonly by casting the pipe in an iron cylinder, having a concentric iron rod or core, and afterwards drawing the pipe through a succession of holes in steel plates, diminishing gradually in diameter, whereby the pipe is lengthened, while its substance is reduced; and the machinery employed for this process is now so perfect, that a faulty pipe is rarely met with. *Lead shot* is prepared by pouring molten lead, in a peculiar manner, through a colander, or perforated plate, placed on the top of a high tower, from whence the globules descend into a tub of water on the floor: the shot thus made is of various sizes, but it is afterwards sorted by means of a series of sieves, having meshes of different degrees of fineness.

The quantity of lead produced in this country is so considerable, that there is a regular surplus for exportation. Mr Brande estimates the smelted lead annually afforded by the British mines at 48,000 tons, which, at £19, 10s. a-ton, the present price of pig-lead, would make the produce worth £936,000. Little dependence, however, can be placed upon the accuracy of such estimates, as the individuals by whom some of the most productive of our mines are worked, studiously conceal the amount of metal which they raise. Nor is much light thrown upon the subject by the custom-house records, as the extent of our exports is, in a great degree, governed by the comparative productiveness of foreign mines, and particularly by those of Adra, in the province of Granada in Spain, the working of which is liable to considerable fluctuation. In ordinary years, the produce of the latter may be stated at 20,000 tons, two-thirds of which are sent to France, while from 1500 to 3000 tons are brought to this country, from whence again, however, it is almost wholly re-exported. The ordinary exports of British lead amount annually to about 15,000 tons, four-fifths of which consist of pig and rolled lead and shot, the remainder being white and red lead and litharge: it is chiefly sent to India, the colonies, Russia, Germany, Holland, and Brazil.

There are many lead mines in Saxony, Bohemia, Silesia, and other parts of Germany; they are also worked, though not on a great scale, in the United States, principally in Missouri.

The fodder of lead at London and Hull is 19½ cwt.; at Newcastle, 21 cwt.; at Chester, 20 cwt.; at Stockton, 22 cwt.; at Derby, 22½ cwt. The cwt. of lead at Hull and Chester is 120 lbs. The load of lead ore of 9 dishes = 3 cwt. nearly.

LEAD, BLACK. [PLUMBAGO.]

LEAGUE, an itinerary measure, reckoned in this country at 3 geographical or nautical miles, or the twentieth part of a degree of latitude, which is very nearly equivalent to 6076 yards, $3\frac{9}{20}$ statute miles, or 5·555 French kilometres. The same measure is generally used by foreign nations for nautical purposes. A variety of other leagues are used on the Continent, particularly in France, where they are the cause of much confusion. An account of the leagues used in foreign states will be found under the heads of those states respectively.

LEAKAGE, an allowance made for waste or loss of liquors.

LEASE. [INTEREST, COMPOUND, AND ANNUITIES.]

LEATHER (Fr. *Cuir*. Ger. *Leder*) consists of the dressed skins of animals. For converting skins into leather, different processes are followed, according to their nature and the kind of article required; as *tanning*, or causing them, after being freed from impurities, to unite with astringent vegetable matter, by which they are rendered no longer liable to undergo putrefaction, insoluble in water, and in a great measure impervious to it; *tawing* or soaking them in alum and other salts, with some animal substance; and *currying* or besmearing them with oil to render the leather soft and completely impervious to water. These processes are often performed on the same skin, by which the leather is fitted for different purposes. The thick hides, of which the soles of shoes are made, are merely tanned, while the thin ones used for *glove leather* and *morocco*, are tawed, except when intended to be dyed, when they also receive a slight tanning in an infusion of sumach. That for the upper leather of boots and shoes is both tanned and curried, and fine *Turkey leather* is first tawed and afterwards tanned.

The leather manufacture in this country is one of very great importance, but we have not at present any means of ascertaining its amount, the excise-duty formerly levied having been repealed in the year 1830. As at that time, however, the quantity of unwrought leather produced in England and Scotland was nearly 60,000,000 lbs., we may estimate the present annual production of the United Kingdom at from 80,000,000 to 85,000,000 lbs., and its value at about £5,500,000. The aggregate value of the leather goods is estimated by some at three times, and by others at four times that of the raw material, making the amount of the manufacture, on the former supposition, £16,500,000, on the latter, £22,000,000. The total number of persons employed in all the branches, including tanners, curriers, shoemakers, glovers, saddlers, &c., is computed at from 250,000 to 300,000.

The exports, though not considerable, are rather on the increase; the quantity, wrought and unwrought, annually shipped, amounts to nearly 2,500,000 lbs., of the declared value of £380,000, besides saddlery and harness to the value of £90,000. These exports are almost wholly to the colonies, especially India, the West Indies, and the United States.

In 1821, the revenue derived from the duty of 3d. a-pound, which then existed on leather, amounted to £600,282. In 1822, the rate was reduced one-half; but, owing to the greater stimulus given to consumption by this reduction, the revenue suffered only to the extent of one-fourth,—the lower duty having produced on an average of the seven following years, which elapsed before it was entirely repealed, no less than £407,814. The reasons assigned for the abolition of this light and productive duty were, that it was unequal in its operation, falling with disproportionate pressure upon the humbler classes, and that the excise regulations, under which the manufacture was placed, formed an obstacle to the improvement of the quality.

LEDGER, in book-keeping, the principal record of a merchant's transactions. It is arranged so as to distinguish the debt or property belonging to each individual or account respectively.

According to Dr Kelly, " the name of this book, in the Italian and other southern languages of Europe, signifies the *master-book;* in French and Dutch, the *great book;* and in German and other northern languages, the *head book*. The derivations given of *ledger* in our principal dictionaries are fanciful and contradictory. According to Bailey, it comes from the Latin verb *legere*, to gather; and Dr Johnson says it is derived from the Dutch verb *legger* (a typographical error for *leggen*), to lie or remain in a place. The word is perhaps derived from the *lieger books*, kept in feudal times for the purpose of recording the rents, services, and duties of tenants, who were called *liegemen*."—(*Book-keeping:* Introd. p. vii.)

LEECH (Fr. *Sangsue*. Ger. *Blutigel*), a fat, slimy, annulose, parasitic worm (*Sanguisuga*, Savigny), generally inhabiting stagnant waters, celebrated for its medical use in cases requiring local blood-letting. Two species have been chiefly employed for this purpose: The German or gray leech (*S. medicinalis*), a native of the N. of Europe, having a deep green body, marked with six longitudinal iron-coloured bands, pretty clear, and spotted with black points; its belly greenish, *spotted*, and bordered with black; and the segments of the body rough from granular eminences: The Hungarian or green leech (*S. officinalis*), found in the S. of Europe, having a large green, or light blackish green body, the back being marked with six iron-coloured bands, spotted at their middle portion and edge; the belly, yellowish green, *without spots*, but broadly bordered with black; and the segments of the body very smooth: of this kind there are three varieties. One German leech is deemed equivalent to two Hungarian leeches. These animals attain maturity in from 5 to 8 years, and may live twenty. They are generally caught by the hand, or by a person wading in the shallow waters during spring, when they adhere to his naked legs: in summer, when they retire to deeper waters, they are usually entangled by means of a raft constructed of twigs and rushes.

As leeches are now scarce in Western Europe, nearly all our supplies come from Hamburg dealers, who procure them from the Ukraine. " Having exhausted all the lakes of Silesia, Bohemia, and other more frequented parts of Europe, the buyers are now rolling gradually and implacably eastward, carrying death and desolation among the leeches in their course—sweeping all before them, till now they have got as far as Poltava, the pools and swamps about which are yielding them great captures" (*Bremner's Russia*, vol. ii. p. 408; 1839). They are sometimes imported in bags, but more usually in small barrels, each holding about 2000, the head being made of stout canvass to admit the air. Many sicken and die on the journey from the place of capture, especially during warm weather. Mr Pereira, in his Materia Medica, states that the best vessels for preserving these animals are unglazed brown pans or wooden tubs; the leaden glazing being supposed injurious. These pans should be very little more than half-filled with soft water. In very hot weather, when the water becomes discoloured, it should be changed every day; otherwise, in summer every four or five days, and in winter once a-month is believed by large dealers to be sufficient. The consumption of leeches is enormous. Some years ago it was stated that four principal dealers in London imported, on an average, no fewer than 600,000 monthly.

LEGHORN. [TUSCANY.]

LEMONS (Fr. *Limons.* Ger. *Limonem.* It *Limoni.* Por. *Limoes.* Sp. *Limones*), the fruit of a tree of the citron or orange family (*Citrus limonum*), a native of Eastern Asia, from whence it has spread to Greece, Italy, and other parts of the S. of Europe. The fruit is oblong in shape, and its juice is analogous to that of the orange, from which it only differs in containing more citric acid and less sugar. The quantity of the former is very great (CITRIC ACID), and, being an approved specific in the prevention and cure of scurvy, a powerful and agreeable antiseptic, as well as an ingredient in punch and many pleasant refrigerant drinks, it forms, in an expressed state, an important article of trade, especially in Italy: being liable to ferment, it is, when exported in this condition, secured in bottles, and covered with a thin stratum of oil. The rind is a bitter aromatic, and is frequently employed in stomachic tinctures, and for preserves and liqueurs; it also yields an essential oil, which is much used in perfumery. For these purposes, lemons are largely consumed in this country; the best are brought from Spain, but they are likewise imported from other places, particularly Portugal and the Azores.

LETTER OF ATTORNEY, OR POWER OF ATTORNEY, is simply a deed authorizing some person to act for the granter in any matter which he has the right of either transacting himself or delegating to another. It applies as well to real as to personal property, but in its former capacity (in which, in Scotland, it is called a procuratory) it is connected with a complicated system foreign to the present work. The powers usually conveyed by the ordinary letter are to collect debts, transfer stock, sell commodities, invest money, receive dividends, or similar purposes. A pure letter of attorney to serve the objects for which such a document is intended is revocable, but when it is used as a transfer or assignment, and does not merely authorize the attorney to act for the granter, but puts him in his place (*e. g.* where a party gets authority to collect accounts, as a consideration for money advanced), the authority is irrevocable. A person holding a letter of attorney represents his principal solely through that authority, and both he and third parties are limited to its terms, and responsible when they are exceeded. There is thus no room for those disputes regarding the powers implied in the nature of the contract, which occur in the case of principal and agent. The power, however, may be either special as to particular transactions, or general as to all a party's proprietory affairs; and it may or may not include a factorship or agency, the terms of which must be interpreted according to the rules applicable to those branches. [FACTOR. PRINCIPAL AND AGENT.] A person acting under power of attorney must do so in the name of his principal, and not in his own. A letter, unless it contain an assignment, falls on the death of the principal. If not so terminated or revoked, the power exists till its purpose is fulfilled, and if clearly expressed, will authorize the subsidiary procedure necessary to bring about the main end; thus a letter to sue for, receive, and *recover* a debt authorizes the attorney to arrest the debtor.—(*Comyns' Digest: Attorney,* c. *Paley on Principal and Agent,* p. 180-192.)

LETTER OF CREDIT, a letter from one mercantile correspondent to another, requesting him to advance money to a certain amount to the bearer, or a third party named. The letter should also describe the manner in which the money is to be reimbursed, and the nature of the voucher to be taken for it. The granting of such a letter is generally announced in course of post to the correspondent; a duplicate of it being sent at same time, and the signature of the party in whose favour the credit is established, or a description of him, in case the document should fall into improper hands.

LETTERS OF MARQUE, in their original acceptation, mean a warrant by a sovereign, authorizing a subject who has received injury from any inhabitants of another state to make reprisals on that state. In this acceptation, the issuing letters of marque does not necessarily accompany a declaration of war; indeed it would appear to be a measure of retaliation, to be resorted to when the aggression on the other side is not sufficiently extensive or public to call for national hostilities. Thus, the 4 Hen. V. c. 7, provides for the granting of letters to those who are aggrieved by foreigners during time of truce. This species of warrant has, however, been long in disuse; and letters of marque have of late been granted in conformity with the provisions of acts for manning the navy, and are virtually commissions to privateers. They have two advantages, 1*st*, They authorize private vessels to fight with enemies without becoming liable to a charge of piracy; and, 2*dly*, They preserve to the owners, officers, and crews, the prizes made by privateers, which would otherwise fall to the crown. For the conditions under which letters of marque have thus been in use to be granted, see 45 Geo. III. c. 72, § 9-15.

LETTUCE, a well-known succulent vegetable (*Lactuca sativa*), used as a salad. After its flower-stem shoots, it abounds with a milky juice, possessing soporific powers, and which, in the strong-scented wild lettuce (*L. virosa*), is so abundant that it has been used as a substitute for laudanum and opium.

LEVANTINE, a stout, close-made, twilled, silken fabric, now little used.

LIABILITIES, a term applied in a comprehensive sense to all the pecuniary obligations of an individual or company.

LIBRA, the Latin, Spanish, and Italian name for a pound in weight; also a Spanish money of account, varying in different provinces.

LICENSE, an official grant of permission. Licenses are required in this country for prosecuting various trades and professions, as pawnbroking, appraising, officiating as auctioneer, banking, dealing in plate, distilling spirits, beer-brewing, malting, dealing in wine, spirits, beer, cider, coffee, and tobacco, and for the making of glass, soap, and other commodities, an account of which will be found under their appropriate heads. These licenses are issued by the Boards of Excise and Stamps. Licenses are also required for certain kinds of vessels, luggers, and boats, under the act for the prevention of SMUGGLING.

LIEN OR RETENTION is a right which the law gives to individuals in certain situations, to retain property of another which may be in their custody, until certain claims of the custodier against the proprietor be satisfied. To constitute lien, the possession must have been legally obtained for the purpose out of which the claim of lien arises, and must not be the result of force, fraud, or accident. The possession must be actual, either through the creditor or one of his agents. Liens are of two kinds, special and general. The former is the simple retention of the property, which has been the subject of some contract, implying payment on the one side and delivery on the other,—the delivery being delayed until the payment is made. Persons bestowing labour or skill in improving the value of any moveable, have generally a lien over it; as, a miller, a shipwright, a tailor, a dyer, a bleacher,—each on the commodity passing through his hands. Carriers and shipowners have a lien for the property they convey; but there is none for dead-freight or demurrage, unless it be stipulated for. There appears to be no lien on a passenger or the clothes he wears, though there may be on his luggage. Innkeepers and stablers, being under an obligation to receive guests and their cattle, are said to be provided by the law with this efficacious remedy as a counterpart of their obligation. Livery stablers and agisters (or persons affording pasture to cattle at so much per week) have no such lien in England; in Scotland, however, a different doctrine seems to be held, that "the lien would be given on the broad principle, that it is the resulting security for the *actio contraria* in all cases" (*Bell's Com.* II. 104). A special lien is easily created by the usage of trade, and may at any time be stipulated as an article in a contract.

General Lien is of a more complicated description, being the right to retain for a general balance arising in the course of a series of transactions. An express contract, or a contract to be clearly implied from the previous dealings of the parties, or a distinct course of commercial usage, is required to constitute such a lien. "To establish a general lien on the ground of usage, strong and satisfactory evidence must be adduced of ancient, numerous, and important instances, in which the right has been exercised. When the usage is general, and prevails to such an extent that all parties contracting may be supposed conusant of it, they will, of necessity, be bound by the custom: for the usage of trade amounts to evidence of contract; and where such usage is general, and has been so long established as to afford a presumption of its being commonly known, it is only fair to conclude that the parties contracted with reference to it" (*Cross*, 15). It would appear that the usage of a *district* may have the effect of at least excluding a species of lien, acknowledged by the law to hold good in places where it is practised. A law-agent or attorney has a general lien on the papers of his client coming into his hands in the proper course of his business. Calico-printers, dyers, and wharfingers have a general lien in their respective trades,—fullers have not (though they are said to have such a right in the city of Exeter by ancient usage, *Cross*, 341-2). A factor has a general lien on the goods in his possession, for the general balance on the whole of the charges he is entitled to in the course of his factorage. If he shall have become security for his principal with his consent, and has been compelled to pay the sum, it is part of the balance on which he has a lien. In this, as in all other cases, the lien may be defeated by the property being deposited with the factor for a specific purpose, for which he is bound to hold it if he take possession of it,—as, where goods were placed in his hands, in consequence of an agreement that they were to be sold for the benefit of a particular creditor (Weymouth *v.* Boyer, 1 *Ves. Jun.* 416). A general lien is held by packers, when they are of the nature of factors, and by insurance-brokers. There is a general lien in favour of bankers —on bills deposited with them for a general account, but not on those deposited for a specific purpose, or on deeds casually left in their offices, after a refusal to advance money on them.

Persons in the situation of being entitled to a lien lose it by relinquishing possession of the property from which they derive it. A factor in a foreign country, however, who has purchased goods for his principal on his own credit, is entitled to stop them *in transitu* after shipment to him; and where the creditor deposits the subject with a third person, apprizing him of the lien, and appointing him to keep possession as his servant, the lien is not parted with. (*Montague on Lien. Paley on Principal and Agent*, 127-153. *Cross on Lien.*)

LIGHTER, a small vessel used for carrying goods to or from a ship in lading or unlading. *Lighterage* is the expenses attendant upon the operation.

LIGHTHOUSE, an edifice constructed near the seacoast, in which lights are exhibited for the guidance of ships. Anciently this purpose was served by fire-towers, where also sacrifices were offered for the safety of the mariners. The most celebrated of the ancient lighthouses was the *Pharos* of Alexandria, erected B. C. 283; its height is stated, though probably with much exaggeration, to have been 400 feet; and it was accounted one of the seven wonders of the world. The most remarkable in modern times are, the *Tour de Cordouan*, erected in 1611, at the entrance of the Gironde in France, the height of which is said to be 186 feet; the *Eddystone*, a circular tower, constructed (1756-59), on a rock distant 4 leagues S.W. from Plymouth Sound; it sweeps up with a gentle curve to the height of 86½ feet; and its utility, beauty, strength, and originality, have shed lustre on the name of the engineer, John Smeaton: and the *Bell Rock*, erected near the entrance of the Tay in Scotland, on the model of the Eddystone, by Mr Stevenson (1812); its height is 113 feet above low water. Besides lighthouses, there are in many places, especially in the estuaries of rivers, "floating lights" attached to vessels moored in certain positions, to indicate the existence of shoals or sunken rocks.

The lights on our coasts generally consist of argand burners, placed on the foci of parabolic reflectors made of silver strengthened with copper; the reflectors being arranged, and the lights exhibited in such a manner that those on the same line of coast should have some essential distinction: thus, some of them are revolving or intermittent, many are fixed, others are placed one above another; some flash once every five seconds, and not a few become alternately red and white. The whole are divided into "harbour lights" and "general lights." Many of the latter were formerly private property, but they are now almost all vested in public boards, one of which, called the Trinity House, possesses besides a controlling power over all the marine beacons of the United Kingdom.

The Trinity House of Deptford Strond was incorporated by Henry VIII. in 1515 for regulating pilots, erecting lighthouses and beacons, and other objects connected with navigation. It possesses an elegant hall in London near the Tower; and is governed by a master, four wardens, eight assistants, and thirty-one elder brethren, most of them persons of distinction; and there are, besides, numerous inferior members termed younger brethren. The powers of the corporation in regard to lights and other seamarks are at present regulated by an act passed in 1836, 6 & 7 Wm. IV. c. 79. This act invested them for the first time with the supervision of the Scotch and Irish lights; and likewise provided for their purchasing the property of certain others, then in the hands of private parties. The number of English general lights under their immediate management is 74, including 20 floating lights. In 1838, the gross amount of dues levied for lighthouses, vested in them prior to the act of 1836, was £119,190; for those transferred to them under that act, £49,810; and for buoys and beacons, £13,141; total, £182,141; yielding, after paying charges, a surplus of £55,005; of which £32,562, arising from lights held by them before 1836, was applicable to the relief of poor seamen, widows, orphans, and other charitable purposes, and £22,443 to the account for private lights since transferred to them (*Par. Paper*, 1840, No. 362). The only private lighthouses not yet made over to the Trinity House are those of the Skerries, Spurn Point, and Tynemouth.

In Scotland, the lights are under the management of the "Commissioners for Northern Lights,"—a corporation (38 Geo. III. c. 58) consisting of the Lord Advocate, the Solicitor General, and twenty-three municipal officers. Their services are gratuitous. The number under their charge is 27; and the net amount of dues levied in 1839 was £42,955, applicable, after paying charges, to the erection of new works. They are, besides, vested by the act 6 & 7 Wm. IV. c. 79, with a general charge of the local or harbour lights.

In Ireland, the lights are under the management of the Corporation (52 Geo. III. c. 115), for improving and extending the Port of Dublin, a body consisting of the Lord Mayor and two Sheriffs of Dublin, three Aldermen chosen by the Board of Aldermen, and seventeen other individuals appointed in the first instance by the act of incorporation, but who have the power of filling up the vacancies. The number of public lights possessed by them is 29, besides 16 harbour-lighthouses, including 5 for which no rates are exacted; their gross revenue in 1832 was £42,061. This corporation has likewise a general charge of all the other local lights.

The Scottish and Irish Boards must give six months' notice to the Trinity House before erecting any new lighthouses, or making any alterations on those already erected: notice of any changes must be likewise given to the public through the Gazette and other newspapers (§ 46). In the event of any difference between the Trinity House and the other Boards, the latter may appeal to the Queen in Council.

We have no recent accounts of the local lights; but, including the 16 Irish harbour-lights already noticed, the number in the United Kingdom may be taken at 95; making the total of public and local lights on the British and Irish coasts about 225.

The rates of duty levied on vessels passing within certain limits vary greatly in respect to different lights: for some of the English ones, only ¼d. per ton is charged on British, and ½d. per ton on vessels belonging to foreign powers with whom we have no treaties of reciprocity; while for others, the charges are as high as 1d. and 2d. per ton on British and unprivileged foreign ships respectively. In Scotland, the charge on coasting vessels (not wholly in ballast) is ½d. per ton for each time of passing every lighthouse, or deriving benefit thereby, except that on the Bell Rock, for which 1d. per ton is chargeable; on British vessels on foreign voyages, 1d. and 2d. per ton are respectively payable for these lights; unprivileged foreign vessels pay double rates (§ 40). In Ireland, the charge is ¼d. per ton for each light, except on vessels wholly in ballast and without passengers, which are exempted; double rates are payable for unprivileged foreign vessels.

LIGNUM VITÆ. [Guaiacum.]

LIME, the protoxide of calcium, is found abundantly in most countries, in a combined state with other substances, particularly in limestone, chalk, and marble, which are carbonates of lime. The common method of obtaining it is by the process of *burning*, in which limestone, mixed with coal or charcoal, is exposed to a strong heat; in this way the carbonic acid is expelled, and the product, called *quick-lime*, is the substance in a state of purity. It is white, or of a pale gray tint, opaque, inodorous, and its taste is acrid and alkaline. When water is poured upon quick-lime it heats, cracks, swells, and a bulky white powder is obtained, called *slaked lime*. The limpid, colourless fluid, called *lime-water*, used as an antacid, is prepared by mixing powdered lime with warm water; and what is termed *milk* or *cream of lime*, is merely slaked lime diffused through lime-water. Lime is used in immense quantities in this country as a manure, and as an ingredient in mortar. In several metallurgic processes it is used as a cheap and powerful flux: it is also employed extensively in soap-making, leather-dressing, dyeing, and medicine, besides many other purposes in common life and the arts.

By 36 Geo. III. c. 110, lime and limestone may be shipped and landed coastwise without any customs document whatever.

LIME, the fruit of a tree (*Citrus limetta*) which grows in Spain, Portugal, France, and East and West Indies. In appearance and natural qualities it resembles the lemon, differing only in being smaller, and nearly round, with a smooth rind, and in the pulp not having such a sharp and powerful acid, but being, on the contrary, flat and slightly bitter. The flavour of the lime is, however, reckoned superior to that of the lemon. It is used for punch, sherbet, and other liquors.

LIME, OR LINDEN, a timber tree (*Tilia Europæa*), of which there are several varieties; the most valuable being the "common lime," a large, fast-growing, beautiful tree, reared in most parts of Britain, but thriving best in rich loam, and in warm and rather moist situations. Its wood is soft and weak, but being close grained, delicately white, and of a uniform colour, it is well adapted for all light works that are to be partially painted, and then varnished. Possessing, even in a higher degree than the maple, the property of not warping, it is used for cutting-boards, and for the keys of musical instruments; while, from its standing the tool well, it is employed by carvers for most part of their wooden ornaments; whence the lime is called, by way of eminence, "the carver's tree." The bark divided into the narrow slips called *bast*, is in the N. of Europe extensively plaited into ropes, and worked into the mats in which flax and hemp are imported from the Baltic.

LIMITATION, in the law of England and Ireland, is the expiry of a right through lapse of time. In Scotland, the analogous provision of law is called Prescription. Perhaps the most important operation of limitation is its creation of a title to real property, which it does by conferring a positive right on the possessor, and creating a personal exception against other claimants; but it is only as a bar to claims connected with commercial transactions that it can be here considered. Limitation may either be a bar to a substantive claim, or to a particular means of proving it.

By the statutes of Limitations (English act, 21 Jas. I. c. 16; Irish, 10 Cha. I. Sess. 2, c. 6) "All actions of account and upon the case, other than such accounts as concern the trade of merchandise between merchant and merchant, their factors or servants: all actions of debt grounded upon any lending or contract without specialty . . . . shall be commenced and sued . . . . within six years next after the cause of such actions or suit, and not after." The period of limitation begins to run when the obligation is exigible; and so when credit is stipulated for, its currency commences on the expiry of the credit. It applies to bills and promissory notes, running from the day when they become due. Notes payable on demand are held as exigible from the date of their completion, and the limitation then begins to run. The exception of "such accounts as concern the trade of merchandise" caused considerable discussion as to whether all merchants' accounts and charges for the price of commodities were intended to be exempt from limitation. "But it is now settled, that accounts open and current only are within [the exception of] the statute: that therefore, if an account be stated and settled between merchant and merchant, and a sum certain agreed to be due to one of them, if in such case he to whom the money is due does not bring his action within the limited time, he is barred by the statute" (*Sir E. Tomlins*). In accounts by tradesmen against their customers, limitation runs on each article, so that the creditor can only recover for those sold within the six years. The currency of the limitation may be stopped and a new period commenced, by such an acknowledgment on the part of the debtor as may suffice to create a new agreement. By the 9th Geo. IV. c. 14, to produce this effect, the acknowledgment must be in writing, and it binds only the party making it, and is not pleadable against co-obligants.

LINEN (Du. *Lynwaat.* Fr. *Toile.* Ger. *Linnen.* It. *Tela.* Por. *Panno de linho.* Sp. *Tela de lino.* Rus. *Polotno*) is strictly cloth woven from the fibres of the flax plant, though the term is now likewise understood to comprehend all kinds of hempen cloth. This manufacture is of the highest antiquity. It appears to have originated in Egypt where the plant is indigenous, and where the mummies are generally found swathed in linen, some of which is stated by Belzoni to be "quite as fine as our common muslin, very strong, and of an even texture." Little is known regarding the state or progress of the manufacture among other ancient nations, or during the middle ages; and the period of its introduction into this country cannot be ascertained. In 1175, flax and hemp were classed in England among the titheable productions; and for long afterwards the government encouraged their growth for the supply of the home manufacture; but the greater part of our linens was imported from Flanders and the north of Europe until last century, when the trade rose into some importance, particularly in Scotland and Ireland. It is, however, only within late years that our linen manufacture can be said to have become a truly national branch of industry, a distinction which it owes mainly to the reduction of the duties on foreign flax and hemp, and the adaptation and application of the inventions of Hargreaves and Arkwright to the spinning of yarn by means of machinery.

In Scotland, at the period of the Union, the linen manufacture, though then styled "the great national staple," was very trifling, and almost wholly domestic. But a board having been appointed (1727) for its encouragement by means of premiums, and bounties granted on the cloth exported, the trade was in course of time greatly extended, so that in 1800 the quantity stamped for sale by the officers of the board was 24,235,633 yards, valued at £1,047,598, which was exclusive of that woven for domestic use. The operation of spinning,—hitherto altogether performed by women in their own dwellings,—was now in part executed by means of flax mills; and in 1814, some of the mill-spinners became also manufacturers. The subsequent progress of the trade, especially after the reduction of the import-duty on flax in 1825, has been most remarkable. This has been more particularly the case at Dundee, now the chief emporium of the linen-trade of the United Kingdom. In 1814, the quantity of flax imported into that place did not exceed 3000 tons, but in 1841 it amounted to 25,865 tons, besides 4181 tons of hemp, the value of the whole being £905,086; while the population of the town increased in the same interval from about 30,000 to 63,825. The manufactures of Dundee are chiefly of the coarser kinds; but of late years the spinning of fine yarns has been introduced, a part of which is woven in the place, and the remainder exported. The shipments from this port in the year ending May 1841 amounted to 697,295 pieces cloth, of the value of £1,322,835; and 122,064 cwts. yarn, amounting to £488,256; the former comprising 208,415 pieces sheeting; 137,834 pieces sailcloth; 170,581 pieces sacking and bagging; 79,564 pieces dowlas; 72,313 pieces osnaburgs; and 28,588 pieces sundries. The number of spinning-mills in Forfarshire was stated in 1839 to be nearly 100, of which 41, possessing 1695 horse-power, were situated within the town of Dundee. The weavers often work in their own houses, but sometimes in factories,—the master in the latter case furnishing the loom, which is generally the common one with the fly-shuttle. Of late the power-loom has been successfully applied to the weaving of dowlas, sheeting, and other fabrics. Besides Dundee and the adjacent district, the linen-trade is prosecuted extensively in Aberdeen, where there are some very large flax-mills; and in Fifeshire, particularly at Dunfermline, a thriving town which has been long celebrated for the manufacture of damasks, table-linen, diaper, and fine shirting.

In Ireland, the linen manufacture first owed its extension to the jealousy of the English, on account of the progress which that country was making in the woollen manufacture, in the reign of William III., and who, at their instigation, introduced a series of laws which had the effect of crushing the latter, and introducing the former in its stead. A board was afterwards appointed for its superintendence; bounties also were granted on exportation; and, what was of more importance, the consumption of England, as regarded the finer qualities, was virtually secured to the Irish manufacturers by the prohibitory duties imposed on foreign linens. The trade in consequence progressively increased. In 1800, no fewer than 31,978,039 yards were imported from Ireland into Britain, besides 2,585,829 yards shipped to other countries; in 1825, the exports were, to Britain, 52,559,678 yards, to other countries, 2,553,587 yards. Since 1825, no account has been taken at the custom-house of the commercial intercourse between the two islands, which was then placed on the footing of a coasting-trade; but according to a report of the railway commissioners, the shipments from Ireland in 1835 amounted to 70,209,572 yards, of the value of £3,730,854. The province of Ulster is that wherein the manufacture is chiefly prosecuted, its principal seat being Belfast; and the cloths woven are mostly of the finer kinds. Spinning machinery was introduced in 1806 or 1808; and in 1839, the number of flax-mills in Belfast was 20, employing 7000 hands. A great proportion of the yarn worked up, however, is sent from England.

In England, various branches of the linen trade are carried on in Lancashire and the West Riding of Yorkshire, as well as in Dorset, Durham, and Somerset; but that part of the United Kingdom is now chiefly distinguished for the spinning of yarn, a branch which has of late risen into high importance, particularly at Leeds, where some of the flax-mills are of the most magnificent description. In 1839, the number was 44; comprising a horse-power of 1259. Of the yarn produced a portion is worked up in the town and adjoining district, but the greater part is sent to other places, especially Ireland and France.

We possess no very recent account of the extent of that part of the manufacture which is carried on in factories. According to returns made by the inspectors in 1835, the number of factories then at work was, in England, 152; in Scotland, 170;

in Ireland, 25; in all, 347: and the number of males employed therein was 10,395, and of females, 22,888; total, 33,283, about one-half of whom were young persons under 18 years of age.

A spindle of linen yarn contains 14,400 yards: it is divided into 24 heers, 48 leas or cuts, or 11,520 threads; each thread being thus 90 inches: the bundle of yarn is 4⅙ spindles, or 60,000 yards. The quality of yarn is expressed in England by figures denoting the number of leas or cuts (each of 300 yards) contained in a pound weight; in Scotland by the number of pounds in a spindle, or 48 leas. Thus, No. 48 yarn in England is called 1 lb. yarn in Scotland. The range of the qualities is considerable, but it is seldom spun of greater fineness than No. 200, the quality fitted for good cambric, though at Leeds it is now produced up to 240.

The improvements introduced into the spinning processes have been such, that while the length of a pound of yarn of average fineness was in 1813 and 1814 only 3330 yards; in 1833, the same weight of average yarn contained 11,170 yards (*Porter's Progress of the Nation*, vol. i. p. 269); and, since the year last mentioned, the average quality has been carried even to a much higher point, the cost of the manufacture being at the same time greatly economized. This perfection of our spinning machinery has not only rendered us entirely independent of Flanders and other parts of the Continent for the supply of yarn, of which, so lately as 1827, nearly 4,000,000 lbs. were imported for the use of our weavers, but it has opened up the entirely new trade of exporting yarn, and has been, besides, as already noticed, mainly the cause of that cheapness of our linens, which, notwithstanding the entire abolition of the bounty system,* has enabled us successfully to compete with other countries, formerly our superiors, in the general markets of the world. The following table shows the progress of our exports since 1820, in so far as we are enabled to furnish details; distinguishing the shipments to the United States and France† respectively, our principal customers for cloths and yarns:—

Years.	Linen Manufactures Exported.					Linen Yarn Exported.		
	Entered by the Yard.		Small Wares.	Total Value.	Exports to Unit. States.	Quantity.	TotalValue.	Exports to France.
	Quantity.	Value.						
	Yards.	£	£	£	£	Lbs.	£	£
1820	38,077,898	——	——	——	——	....	....	....
1825	52,080,185	——	——	——	——	....	....	....
1826	39,986,715	——	——	——	——	....	....	....
1827	55,132,189	2,057,361	71,032	2,128,383	762,713	....	....	....
1828	60,287,814	2,120,276	66,146	2,186,422	670,778	....	....	....
1829	57,698,372	1,953,607	52,037	2,005,644	653,298	....	....	....
1830	61,919,963	2,017,776	48,648	2,066,424	725,513	....	....	....
1831	69,233,892	2,400,043	61,661	2,461,704	1,021,696	....	....	....
1832	49,531,057	1,716,084	58,643	1,774,727	414,160	110,188	8,705	6,516
1833	63,232,509	2,097,273	69,751	2,167,024	830,820	935,682	72,006	68,299
1834	67,834,305	2,357,991	85,355	2,443,346	1,047,744	1,533,325	136,312	130,561
1835	77,977,089	2,893,139	99,004	2,992,143	1,564,826	2,611,215	216,635	198,823
1836	82,088,760	3,238,031	88,294	3,326,325	1,687,877	4,574,504	318,772	276,942
1837	58,426,333	2,063,425	64,020	2,127,445	584,597	8,373,100	479,307	401,007
1838	77,195,894	2,717,979	102,293	2,820,272	941,281	14,923,329	746,163	600,806
1839	85,256,542	3,292,220	122,747	3,414,967	1,264,008	16,314,615	818,485	644,144
1840	89,373,431	3,194,827	111,261	3,306,088	975,586	17,733,575	822,876	629,533
1841	——	——	——	3,356,030	——	——	970,840	——

Besides the United States (whose demand, it will be observed, is subject to striking fluctuations) linens are largely exported to British America, the W. Indies, S. America, especially Brazil, and to France, Spain, and Gibraltar: they also enter pretty largely into our trade with Italy, Portugal, the East Indies, and Australia; and small quantities are sent to Germany, Africa, and other parts. The only other countries, besides France, to which yarn is sent to any amount, are Germany, Holland, Belgium, and Italy, though to a small extent in the last case. No foreign linens are entered for consumption in this country, except certain fine qualities of cambric, including pocket handkerchiefs, which are still imported from France. Some plain cloths are besides brought, though not to any great extent, from Russia and Germany, for re-exportation to the W. Indies, United States, and S. America.

We possess no data for calculating the present value of the linen manufacture of the United Kingdom, but do not believe we shall err greatly in estimating its annual amount at from £9,000,000 to £9,500,000, or nearly one-fourth that of the cotton manufacture. [Flax. Hemp.]

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* The bounties ranged from ½d. to 1½d. a-yard, according to quality and value; and the amount generally paid was from £300,000 to £400,000. Their abolition, which was gradual, began in 1825, and the payments ceased on 5th January 1832. [Bounty.]

† A considerable addition was made to the French duties on linens and yarns by ordonnance, June 26, 1842, which, unless retracted or modified, will materially influence our future exports.

LING, a valuable species of cod (*Lota molva*, Cuv.), having a slender body, usually from 3 to 4 feet in length. Large quantities are caught among the Hebrides, in the Orkneys, and on the Yorkshire coast; in Cornwall and the Scilly Isles; also on the Irish coast. In Zetland, the principal fishing is from May to August; whereas in Cornwall, they are caught in January and February. Besides a portion that is consumed fresh, the fish are split from head to tail, cleaned, salted in brine, washed, and dried: but the demand generally falls short of the quantity cured. The ports of Spain are the foreign markets chiefly supplied. The air-bladders, or *sounds*, are prepared separately, and with those of the cod-fish are sold pickled.

LINSEED (Da. *Horrfroe*. Du. *Lynsaad*. Fr. *Graine de lin*. Ger. *Leinsaat*. It. *Linseme*. Rus. *Semja lenjanoe*), the produce of the flax-plant, consists of small, bright, grayish-brown, slippery, elongated bodies, containing a mealy oleaginous albumen, which yields, by expression, oil in such great abundance that the seed forms for this purpose, as well as for reproduction, an important article of trade. Linseed is preferred when bright and heavy, and especially that which, when bruised, appears of a light or yellowish green colour, fresh and oily. It is produced only in small quantities in the United Kingdom; but nearly 4,000,000 bushels are now annually imported; three-fourths of which come from Russia: the remainder is chiefly from Prussia, Italy, and India; but small parcels are likewise brought from N. America, Holland, Sweden, Denmark, Turkey, and Egypt. About one-fifth of the importations is used in Ireland for sowing, for which purpose the Dutch seed is preferred. [Flax.]

In Russia, the great seat of this trade, the crop fluctuates exceedingly, the exports varying from about 400,000 to 700,000 Imperial quarters. The principal ports of shipment are Riga and St Petersburg. The chief general distinctions of linseed are those of *sowing* and of *crushing* seed. "The former," says Mr Clark, "is understood to be a select article shipped from Riga, Windau, Liebau, and Pernau, in casks, with official marks warranting the seed to be fresh and fit for sowing; the latter is of various quality, intended to be used and fit for crushing only, and shipped from all ports of Russia, either in bulk, or in mat bags, called 'kools.'

"At St Petersburg but a small part of the annual supply derived from the nearer flax-districts arrives and is ready for shipment in May, June, and the fore-part of July; for the principal part reaches that market from the middle of July till the end of September, and comprises what is called Morshansk and Saratoff linseed, and uses to be of a quality superior to the earlier arrivals. The shipment is made chiefly in the mat bags above alluded to, which are not paid for separately. The article sells there by the chetvert measure, forming the contents of a kool.

"Contract purchases for forward delivery are made in autumn, winter, and spring, either with the whole price agreed for, or part thereof, most frequently 25 to 50 per cent. paid down cash, in advance at once, or by instalments; the remainder being payable on delivery."—(*Russia Trader's Assistant: Exports*, p. 70.)

All the seed not exported before winter is sent to Holland to be crushed for oil.

Linseed-Oil is what is called a drying oil. Cold-drawn, it is greenish-yellow, and more viscid than when hot-drawn. Sp. gr. ·934. It is one of the cheapest fixed oils; and is used in the manufacture of paints, varnishes, and printing ink.

Linseed-Oil Cake, the substance which remains after the oil is expressed, contains the albuminous and mucilaginous part of the seed, and is used for fattening cattle.

LINSEY, or LINSEY WOOLSEY, a kind of flannel, of which, however, only the woof is composed of wool, the warp being thread.

LIQUORICE ROOTS (Fr. *Bois de reglisse*. Ger. *Sussholz*. It. *Legorizia*), the roots of a perennial plant (*Glycyrhiza glabra*), a native of the south of Europe, but cultivated in England, particularly at Pontefract, in Yorkshire. They are very long, about an inch thick, flexible, fibrous; of a brown colour, and when fresh, juicy; taste sweet, and slightly bitter. They are extremely apt to spoil, and it is necessary to preserve them in sand, or in some very dry place. Liquorice roots are an article of the materia medica, and are also in demand by brewers and druggists. They are used both in the form of extract and of powder.

LIQUORICE JUICE (It. *Sugo di regolizia*. Sp. *Regaliz en bollos o' pastillas*), called also Spanish juice, black sugar, or *succus liquoritiæ*, is the inspissated juice of the fresh roots just specified; and is imported from Sicily, Italy, and Spain, in cylindrical rolls, covered with bay leaves. It should be quite black, brittle when cold, and break with a smooth glossy fracture, have a sweet taste without empyreuma, and be almost entirely soluble in water. It is used in medicine, particularly in tickling coughs. The Italian is the best; that from Spain is scarcely marketable. About 8000 cwts. are annually imported, almost wholly from Sicily and Italy. Little or no liquorice juice is made in this country, except in Yorkshire, where an extract is prepared under the name of Pontefract cakes.

Refined Liquorice, or rather what is commonly called so, is generally prepared in this country by compounding inferior juice with glue or mucilage. It is in small cylindrical pieces, not thicker than a goose-quill.

LISBON. [PORTUGAL.]

LISPOND, a German weight, generally equal to about 14 lbs.

LITERARY PROPERTY may be defined as the produce of intellectual exertion, published to the world, but in such terms and under such conditions that the right of publication and the benefits derivable therefrom are matter of property. The peculiarity of this species of property consists in its untangible nature, which leaves no room for applying to it the ordinary criteria of possession or occupancy, by which physical property is ascertained; and a peculiar code has thus been rendered necessary for its regulation. A manuscript or a painting, while the former is not printed or the latter engraved, are each viewed as pieces of physical property, subject to the ordinary rules of possession. It is when copies come to be multiplied for publication that literary property is constituted and brought into existence.

The law of copyright is now embodied in 5 & 6 Vict. c. 45. As to all works published after the date of the act (1st July 1842), it extends to the lifetime of the author, and to 7 years after his death; but if these 7 years should expire within 42 years from the first publication, the copyright is to exist till the termination of 42 years from the date of publishing. The copyright of a book published after the author's death, and after 1st July 1842, is to exist 42 years, in the person of the proprietor of the MS. (§ 3). The same period of copyright is extended to the authors of books published before 1st July 1842, and to their representatives; but publishers who have acquired the copyright of them, hold it only to the extent of the old law (viz. 28 years or the lifetime of the author), unless the author, or his representative holding the copyright, consent to accept the benefits of the act, and enter a minute to that effect in the register at Stationers' Hall, when the remaining copyright "shall be the property of such person or persons as in such minute shall be expressed" (§ 4). Where the holder of a copyright after the author's death refuses to give the world the benefit of the work, the judicial committee of the privy council may grant a license to publish it, on its being shown to be advantageous to the public (§ 5).

Entry at Stationers' Hall.—Proprietors of the copyright of books to be published may enter in the register of the Stationers' Company, the title, time of publication, name and abode of publisher, and the name and abode of the proprietor of the copyright, or of any portion of it, defining what portion: 5s. is payable to the company's officer (§ 13). Any person aggrieved by such an entry, may have it corrected by application to any of the courts at Westminster Hall (§ 14). The register may be consulted by any one, on payment of 1s. for each entry inspected. A certified extract may be obtained on payment of 5s. (§ 11).

Copies to Public Libraries.—To the British Museum, a copy of each book must be sent, on the best paper used in the impression, with all plates, &c., that may belong to it, finished in the best manner, and a like copy of every subsequent edition, if there be alterations. If the work be published within the bills of mortality, the delivery must be within one month—if elsewhere, within three (§ 6). The following libraries are entitled each to a copy of the ordinary impression of every book:—The Bodleian, at Oxford; the Public Library, at Cambridge; the Advocates' Library, at Edinburgh; and Trinity College Library, at Dublin. The book must be given within a month after any demand in writing by the proper officer of the Stationers' Co., or by a librarian of the privileged library, demanding the copy, the notice being given within a year after the publication (§ 8). The copy for any library may be delivered to the librarian, a receipt being obtained from him (§ 9). The penalty for not delivering each copy is, besides the value of the copy, a sum not exceeding £5, recoverable either summarily before two justices, or by an ordinary action (§ 10). When entry is omitted, in the case of a book published after the date of the act, the remedies specially conferred by the act for infringement of copyright are lost (§ 24).

Constitution and Transmission of Property.—The man who projects and composes a book is the proprietor of the copyright, unless he have conveyed it away. A simple method of conveyance is appointed by the act, viz. an entry of assignment in the register at Stationers' Hall (§ 13). The law was formerly in a very doubtful state as to proprietorship, where the author was employed by publishers; and especially in the case of contributions to periodicals and works of reference. It has now been distinctively fixed by the following clause in the new act:

"That when any publisher or other person shall, before or at the time of the passing of this act, have projected, conducted, and carried on, or shall hereafter project, conduct, and carry on, or be the proprietor of any encyclopædia, review, magazine, periodical work, or work published in a series of books or parts, or any book whatsoever, and shall have employed or shall employ any persons to compose the same, or any volumes, parts, essays, articles, or portions thereof, for publication in or as part of the same, and such work, volumes, parts, essays, articles, or portions shall have been or shall hereafter be composed under such employment, on the terms that the copyright therein shall belong to such proprietor, projector, publisher, or conductor, and paid for by such proprietor, projector, publisher, or conductor, the copyright in every such encyclopædia, review, magazine, periodical work, and work published in a series of books or parts, and in every volume, part, essay, article, and portion so composed and paid for, shall be the property of such proprietor, projector, publisher, or other conductor, who shall enjoy the same rights as if he were the actual author thereof, and shall have such term of copyright therein as is given to the authors of books by this act; except only that, in the case of essays, articles, or portions forming part of and first published in reviews, magazines, or other periodical works of a like nature, after the term of 28 years from the first publication thereof respectively, the right of publishing the same in a separate form shall revert to the author for the remainder of the term given by this act; provided always, that during the term of 28 years the said proprietor, projector, publisher, or conductor shall not publish any such essay, article, or portion separately or singly without the consent previously obtained of the author thereof, or his assigns: provided also, that nothing herein contained shall alter or affect the right of any person who shall have been or who shall be so employed as aforesaid to publish any such his composition in a separate form, who by any contract, express or implied, may have reserved or may hereafter reserve to himself such right; but every author reserving, retaining, or having such right, shall be entitled to the copyright in such composition when published in a separate form, according to this act, without prejudice to the right of such proprietor, projector, publisher, or conductor as aforesaid. The entry of such works in series may be made at Stationers' Hall, at the commencement of the issue, once for all" (§ 11).

Copyright is declared by the act to be personal property (§ 25).

Remedies against Piracy.—The remedy is by an ordinary action of damages, against any party publishing or selling without license a work belonging to another, or importing copies of it from abroad (§ 15). Where a person pursued for piracy intends to question the pursuer's title, he must send specific notice before trial, stating the facts as to composition and proprietorship, on which he founds (§ 16). All actions must be commenced within twelve months after the cause of action has arisen (§ 26). Pirated copies of books become the property of the owner of the copyright (§ 23). Any person accessory to importing for sale or hire copies of books in which there is copyright, on conviction before two justices of peace, forfeits for each offence £10, and double the value of the copies imported. Officers of customs and excise are authorized to seize such illegally imported copies; and, on the recovery of the penalty, £5 goes to the officer seizing,—the remainder to the proprietor of the copyright (§ 17).

It is sometimes very difficult to determine whether a copyright has been infringed, and how far. In the case of books of reference, especially those belonging to the exact sciences,—in road-books, calculation-tables, and almanacs, it will often happen that parties cannot go over the same ground without producing the same result, so that identity is not in every case (as in ordinary literary works) proof of plagiarism. The difficulty, however, is greatly overcome by keeping in view the principle at the foundation of literary property,—that no man is entitled to make use of the labours of his neighbours for his own behoof. The chief difficulty in such case rests in the evidence of adaptation, and this must often be incidental,—it will arise from peculiarities in order and method which the plagiarist has been found to have mechanically employed without knowing their application; from the use of exclusive information, to which the plagiarist had no access; and it may even arise in the adoption of the typographical errors of the original. The most clear evidence generally obtainable, is the distribution of part of the original work in the printing-office as "copy" to the compositors.

International Copyright.—By a late act, copyright may be secured in works first published abroad, if the publication have been in a country which grants a reciprocal privilege to books first published in the United Kingdom (1 & 2 Vict. c. 59). The privilege is proclaimed by order in council. It cannot exceed the amount of copyright privilege which the acts allow to the publications of this country (§ 1), but it may be for any shorter period that the order in council may direct (§ 7). The title of the book, name and place of the author, and time and place of first publication abroad, must be entered at Stationers' Hall, and a copy must be deposited in the British Museum within a time specified in the order (§ 1). No copyright in a work first published abroad can be enjoyed in the United Kingdom, except in terms of the act, which includes music, maps, charts, and plans (§§ 13, 16).

In Dramatic Compositions there is now, by 3 & 4 Wm. IV. c. 15, a copyright as against performance on the stage. It extends absolutely to all pieces not printed and published at the passing of the act, and to all that have been printed and published at any time not more than ten years before the date of the act (10th June 1833), in both cases for twenty-eight years from the date of publication, and thence during the author's life. By 5 & 6 Vict. c. 45, above mentioned, the period extended by the act to other literary property is extended to dramatic representations : and it is provided that an assignment for publication of a dramatic piece is not to convey the right to represent it (§§ 20, 21). The penalty for infringement of this species of copyright is 40s., or damages to the extent of the sum cleared by the representation, and double costs.

In Musical Compositions there is a copyright which, by §§ 20 & 21 of 5 & 6 Vict., is made precisely the same as that in dramatic compositions.

Lectures.—Another late statute (5 & 6 Wm. IV. c. 65) constitutes a copyright in lectures delivered, which are not to be published without the lecturer's consent, either by persons who have obtained liberty to attend them, through the payment of fees, or by any other unauthorized person. The privilege extends by the statute to the usual period of copyright, which, at the time the act was passed, was 28 years. There is no mention of this species of copyright in 5 & 6 Vict.

LITHARGE (Fr. *Litharge.* Ger. *Glätte*), a semi-vitrified oxide of lead, in the form of small shining heavy scales, or more or less agglutinated masses. It is usually produced in the purification of silver from lead, and the refining of gold and silver by means of this metal. According to the degree of fire and state of oxidation, it has a pale or a deep colour,—the one is called litharge of silver, and the other litharge of gold. Litharge is employed in medicine, and by potters, glass-makers, painters, and others. About 500 tons are annually exported, chiefly to Germany and Russia.

LITMUS (Fr. *Tournesol.* Ger. *Lackmus*), a violet-blue dye, prepared chiefly in Holland from a lichen (*Lecomora tartarea*), which grows in the Canary and Cape de Verde Islands. It is imported in small cubical cakes, of a dusky blue colour, light, and easily pulverized. It is employed to stain marble ; also as a chemical test of acidity, being reddened by acids, while the blue is restored by alkalis ; for this purpose it is employed either in the form of a tincture, or of unsized paper coloured with it.

LITRE, a French measure of capacity equal 1¾ Imp. pint nearly.

LIVRE, the integer of account in the old system of France, is equivalent to 9½d. nearly ; and 81 livres = 80 francs. Livre is also the French name for a pound weight. The livre usuel = 1 lb. 1 oz. 10⅓ drams avoird.

LLOYD'S, the name of a subscription coffeehouse in London, celebrated on account of its being the office of the Society of Underwriters. [INSURANCE, MARINE.] Previous to the late fire, it was situated in a gallery of the Royal Exchange, since which it has been removed to the South Sea House. Few or none of the commercial institutions of Britain have excited in a higher degree the admiration of intelligent foreigners. "The establishment of insurances at Lloyd's," says Baron Dupin, "has rendered signal services both to the commerce of the British empire and to that of other states. The society has agents in most of the principal ports of all parts of the world ; it makes public the events, both commercial and maritime, which it learns through their means : these accounts are received by the public with a confidence which nothing for more than a century has tended to destroy." "At Lloyd's," says Von Raumer,* "close to the dial which tells the hour, is one still more interesting here, which tells the direction of the wind, and is connected with the weathercock on the roof. Intelligence of the arrivals and departures of ships,—of the existence and fate of vessels in all parts of the world,—reports from consuls and commissioners resident in every foreign town,—newspapers and gazettes from every country, are here to be found, arranged in such perfect and convenient order, that the entire actual state of the commercial world may be seen in a few minutes, and any of the countless threads that converge to this centre may be followed out with more or less minuteness. The whole earth, or the whole commercial machinery of the earth, appeared to me to be placed in the hands of the directors of Lloyd's coffeehouse."

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* The Prussian traveller's description refers to the rooms in the Old Exchange, but their general characteristics will of course be preserved in the new edifice.

In order to become a subscriber to this institution, the candidate must be proposed by six members, and afterwards accepted by the managing committee. The rooms are open for the transaction of insurance business from 10 A. M. to 5 P. M.

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

For many years a committee of gentlemen connected with Lloyd's has superintended a registry of the qualifications of ships; which, upon the reports made of them by surveyors, are ranked in different classes, and a preference given as to employment and insurance, according to the place assigned to them. Until 1834, the age of the ship was held to be conclusive evidence as to her deterioration, without reference to original quality or repairs; but this regulation having led to the building of ships with little regard to durability, and to the application of repairs as sparingly as possible, the system of classification was in that year thoroughly reformed. Ships are now classed according to their real and intrinsic qualities at the time of survey; and thus every inducement is presented to build them in a substantial manner, and to give them thorough repairs as often as needed. The rules for the guidance of owners are stated in detail in the Register Book. The principal are the following:—

FIRST CLASS SHIPS.—*First Description* comprises all which have not passed a prescribed age, provided they are kept in a state of complete repair and efficiency; and they are designated by the letter A (§ 33).

The period of continuance in this class varies from four to twelve years, according to the original construction and quality of the vessel, the materials employed, and the mode of building; but after the expiration of the prescribed period, ships are permitted to remain in this rank, or to be restored thereto for a further limited period, on the conditions after mentioned.

If, on the termination of the period of original designation, a shipowner should wish to have his ship *remain* on the letter A, he is to send a written notice thereof to the committee, who then direct a special survey to be held; and if, from the report of such special survey, the ship shall appear to be in all respects in a sound and efficient state, and to have preserved her original form unaltered, the committee will *continue* such ship on the letter A for such further period as they may think fit,—not exceeding, however, one-third of the number of years which had been originally assigned (§ 54).

If, at any time before the expiration of two-thirds of the number of years, *beyond* the period for which ships may have been originally assigned to remain in the First Description of the First Class, an owner be desirous to have his ship restored to that description, such restoration (after survey and repairs) will be granted for a period not exceeding two-thirds of the time originally assigned for the remaining therein; the same to be calculated from the date of such repairs (§ 55).

If, *at any age* of a vessel, an owner be desirous to have the ship restored to the First Description of the First Class, such restoration (after survey and repairs) will be granted for so long a period as may be deemed expedient by the committee, not exceeding in any case the term of six years (§ 57).

On the same principle of giving every proper advantage to ships which shall be actually proved to be superior of their class, and in excellent condition, ships which have been *restored* to the class A shall be entitled to an extension of the time; but the term of such extended continuance shall be limited to a period not exceeding one-third of the number of years for which the ships may respectively have been *restored*, without any reference whatever to the period originally assigned to them (§ 59).

Second Description comprises all ships which, having passed the prescribed age, but have not undergone the repairs which would entitle them to be continued in or restored to the First Description, or having been continued or restored, and the additional period thus assigned having expired,—appear on survey to be still in a condition for the safe conveyance of dry and perishable cargoes; and they are designated by the diphthong Æ: but such of the ships of this class as are found on survey to be of superior description, being fit for the conveyance of dry and perishable goods *to and from all parts of the world*, are distinguished by an asterisk, thus prefixed, *Æ (§ 60).

For the purpose of continuing a ship in this class a careful survey is required annually, or on the return from every foreign voyage; but if not surveyed within twelve months after entering the Second Description of the First Class, such ship having been during that time in some port in the United Kingdom, the character will be omitted until such survey be held; or, as the case may be, she will be allowed to pass into the class E (§ 61).

British North American built ships, and ships built in India, are subject to special rules of classification (§§ 62, 63, 70).

SECOND CLASS SHIPS comprise all found on survey unfit for carrying *dry* cargoes, but perfectly fit for the conveyance *to and from all parts of the world* of cargoes not in their nature subject to sea-damage, and they are designated by the letter E. Subject to occasional inspection, ships are continued in this class so long as their condition shall, in the opinion of the committee, entitle them thereto (§§ 64, 65).

THIRD CLASS SHIPS comprise those in good condition, and found on survey fit for the conveyance on *short voyages* (not out of Europe) of cargoes in their nature not subject to sea-damage; and they are designated by the letter I (§ 66).

STEAM SHIPS require to be surveyed *twice in each year*, when a character is assigned to them according to the report of survey as regards the classification of the hull and materials of the vessel. That, with respect to the boilers and machinery, the letters "M C" are inserted in the Registry Book, when at those periods the owners have delivered to the surveyors the certificate of a competent master-engineer that they are in good order (§§ 78, 79).

The *stores* of all classes of vessels are designated by the figures 1 and 2,—1 signifying that the vessel is well and sufficiently found, 2 that she is deficient in either quantity or quality. Thus, "12 A 1" denotes a twelve-years ship of the first description of the first class, with stores well and sufficiently found.

The case of damages to ships is subject to special regulations; but the class of a ship is never reduced before communicating in writing with the owner, master, or agent (§ 21-25).

The office of Lloyd's Register Society is 2 White Lion Court, Cornhill, London. The subscription is £3, 3s. per annum, for which a Register Book and Supplements are delivered annually. In the book for the year 1841-42, there were of class A, 5961 ships; Æ, 3568; E, 890; I, 54; no character assigned, 1856; in all, 12,329.

LOADSTONE. [MAGNET.]

LOAN FUND SOCIETIES, benevolent associations for accommodating the industrious poor with small loans. Societies of this kind have been long common in the sister island; and Mr Inglis, in his "Ireland in 1834," testifies to their utility. Since that year they have, under the protection and regulation of a new statute, and a "Central Loan Fund Board" established in Dublin, been greatly increased. In the beginning of 1841, the number enrolled under this Board was 243, which was exclusive of numerous societies in connexion with a London association termed the "Irish Reproductive Loan Institution." Of these 243 societies, 215 had made returns to the board, showing that in 1840 the amount circulated by them was no less than £1,164,046; the number of borrowers, 463,750; the profit, after paying interest to depositors and expenses of management, £15,838; deducting from which the loss of 17 societies, £361, left of net profit, £15,477. A few of these societies partake of the nature of Monts de Piété, but in general they are petty banks, receiving on deposit the small savings of one class, and lending them out to another in loans; each individual borrower giving two joint-securities. Sometimes funds are raised by deposits from the gentry, free of interest, but more commonly on debentures bearing 5 or 6 per cent. The managing committee is formed of the resident clergy and others, who act gratuitously; and the net profit is appropriated towards a dispensary, school, clothing and fuel for the poor, or supplying indigent farmers with seed at prime cost. The general tendency of these associations appears to be to engender and foster habits of industry, sobriety, and punctuality; "and the board are of opinion that the prosperity of the system is in no small degree attributable to the societies being upheld by their own resources and exertions." For a fuller account of the working of the system, we must refer to the annual reports of the board presented to Parliament.

In England, these societies are mostly confined to the metropolitan district; and the accounts laid before Parliament in 1841 by Mr Pratt, the barrister appointed to certify the rules of savings banks, show their number on 31st December 1840 to have been only 45; the amount circulated in the previous year, £67,711; and the number of borrowers, 11,438. Neither the English nor the Irish accounts show the proportional amount of the loans repaid by the securities.

The Irish societies are regulated by the act 6 & 7 Wm. IV. c. 55, as amended by 1 & 2 Vict. c. 78. These acts provide for the establishment of a Central Board in Dublin; the revision of the societies' rules by a barrister; the limitation of loans to £10 at one time, and the interest to 6d. a-pound for 20 weeks; the appointment of officers, managers, and trustees; the exemption of documents from stamp-duty; the recovery of the loans before justices; and a variety of other rules as to their economy, safety, and good order. In England, the regulating statute is 3 & 4 Vict. c. 110, which contains provisions somewhat similar; allowing, however, a loan of £15 to one individual, and limiting the interest to 5 per cent.

The loan society system is not practised in Scotland.

LOBSTER, a long-tailed crustaceous animal (*Astacus marinus*) found in abundance on the rocky coasts of Britain and other parts of Europe, particularly Norway, from whence large quantities are brought to London: the number annually sold at Billingsgate is nearly 2,000,000. They are caught by traps or pots made of twigs, baited with garbage; also by baited nets; and in some countries by torch-light, with the aid of a kind of wooden forceps. In summer, when they deposit their eggs, they are found near the shore; in winter they are seldom taken in less than 12 or 15 fathoms. A sizeable animal is from 1 to 2 lbs. in weight.

No lobsters must be taken on the coast of Scotland between 1st June and 1st September, under a penalty of £5 for each offence; 9 Geo. II. c. 33, § 4.

Fresh lobsters, however taken or imported, may be landed in the United Kingdom without report, entry, or warrant; 3 & 4 Wm. IV. c. 52, § 2.

LOCKS (Fr. *Serrures*. Ger. *Schlösser*. It. *Serrature*. Por. *Fechaduras*. Rus. *Samki*. Sp. *Cerraduras*) are in this country principally manufactured at Wolverhampton in Staffordshire; but a large share of the trade is likewise possessed by

Birmingham and London, where those of the finest quality are made. [IRON MANUFACTURES.]

LOG, the apparatus used for measuring the velocity of a ship's motion, consists of the *log-ship* and *line* attached to it. The former, a small thin wooden quadrant, having the circular edge loaded with lead to make it stand upright, keeps its place in the water when thrown out, while the line is unwound from a reel in the ship's gallery; and the length unwound in a certain time gives the rate of sailing. This is calculated by *knots* made on the line, the length between which, usually 40 or 50 feet, is so proportioned to the time measured by a sand-glass, that the number unwound shows the number of miles which the ship is sailing in the hour. The *log-book*—the ship's journal—contains an account of the progress made as deduced from observations of the log. It is posted daily from the *log-board*, where these are first recorded. It also contains the state of the weather, direction of currents, position of rocks or shoals, seeing or speaking other vessels, and, in short, all matters relating to the ship's *place*, not only for present convenience, but as matter of intelligence, or of evidence in case of future inquiry. The course and distance run, computed from the log-book, termed by seamen *dead-reckoning*, furnishes an approximative estimate of the ship's position, which is necessarily used until an opportunity is afforded of taking observations of longitude and latitude, or of approaching land. Men-of-war steamers keep two log-books,—the ordinary ship's log, and an account of the engine.

LOGWOOD (Fr. *Bois de Campèche*. Ger. *Blauholz*. It. *Campeggio*. Sp. *Pálo de Campeche*), a dyewood obtained from the *Hæmatoxylon Campechianum*, a tree which grows in Campeachy and Jamaica, especially the former, from whence the finest wood is procured. It is hard, heavy, of a deep orange colour, a sweetish astringent taste, and peculiar odour; and is brought to us in large blocks or billets, which are afterwards reduced to chips. Logwood is extensively employed for compound colours, but its chief use is for blacks, and certain shades of gray: an extract from it is also used in medicine. From 25,000 to 30,000 tons are annually imported,—nearly one-fourth of which, however, is re-exported to Russia, Prussia, and other parts of northern Europe.

LOMBARD, a bank for lending money on pawn.

LOSS. [INSURANCE, MARINE.]

LOTTERIES, PUBLIC OR STATE. The first English lottery on record was in 1569, for the benefit of the harbours and other works. Licenses for various schemes were afterwards occasionally granted; and in 1694, state-lotteries were introduced in aid of the finances. The principle upon which the public lotteries were conducted was that of selling a certain number of chances or tickets, and distributing by lot a part only of the money collected among a small number of the ticket-holders. The immorality of the government in thus encouraging a spirit of gambling among the people, and misleading them from those habits of continued industry essential to the prosperity of a commercial nation, soon became apparent, and in course of time was forced upon the attention of Parliament. In 1808, a Committee of the House of Commons reported, "that by the effects of the lottery, even under its present restrictions, idleness, dissipation, and poverty are increased, —the most sacred and confidential trusts are betrayed,—domestic comfort is destroyed,—madness often created,—crimes subjecting the perpetrators of them to the punishment of death are committed,—and even suicide itself is produced, as will fully appear by the evidence submitted to the House."—"No mode of raising money appears to your Committee so burdensome, so pernicious, and so unproductive." Notwithstanding this just denunciation, government persisted in raising about a quarter of a million annually by contributions which, to use the forcible words of M. Say, were in most cases taken "from the bread of misery, if not from the fruit of crime," until 1823, the year when the last act was sanctioned for the sale of lottery-tickets. This act likewise contained provisions for the suppression of all private lotteries, and the sale in this kingdom of shares in any foreign lottery. This latter provision being extensively evaded, another statute was passed in 1836 (6 & 7 Wm. IV. c. 66), imposing a penalty of £50 for advertising foreign and other illegal lotteries. Devices are used, however, for the evasion even of this act.

Lotteries have been abolished in France, but they still exist in many other parts of the Continent. In Italy, their pestilential influence affects every town and all classes: each government has one, the tickets for which are sold in all the other states, and a drawing takes place every week or two; while, the tickets being infinitesimally divisible, chances may be purchased by day-labourers and beggars, who are there the most eager of all gamblers (*Spalding's Italy and the Italian*

Islands, vol. iii. p. 249). Lotteries are also (or were lately) sanctioned for public purposes in several parts of the United States.

LUBEC, one of the Hanseatic states, consists of a town and small territory, lying chiefly at the mouth of the Trave, between Holstein and Mecklenburg. Area, including detached lands shared with Hamburg, 130 sq. miles. Population, 46,500; that of the city being 26,000. The government is vested in a senate and house of burgesses.

The city is clean, cheerful, and pleasantly situated, in lat. 53° 52′ N., long. 10° 41′ E., on an eminence between the Wakenitz and Trave, about 10 or 12 miles from the mouth of the latter, where is Travemunde, its port, with which it communicates by means of lighters and steamers. Although by no means so important as formerly, it still may be considered a thriving town. It possesses various small manufactures, a considerable share of the carrying trade in Russian produce, and an extensive transit trade, particularly with HAMBURG, distant only 36 miles, with which it is connected by means of the Trave and a canal. Exports, chiefly corn. Imports, French wines and silks, British manufactures, and colonial produce. From Travemunde steam-packets sail regularly for Petersburg, Copenhagen, and Stockholm.

MEASURES, WEIGHTS, MONIES, DUTIES, &c.

Measures and Weights.—The ell of 2 feet = 22·70 Imp. inches.

The ahm of 20 viertels, 40 stubgen, or 80 kannes = 31·87 Imp. gallons.

The last of wheat or rye of 8 dromts, 24 barrels, or 96 scheffels = 11·04 Imp. quarters: the last of oats, similarly divided, = 12·95 do.

The centner of 8 lisponds or 112 Lubec lbs. = 119·67 lbs. avoird.; and 100 Lubec lbs. = 106·85 lbs. avoird. Gold and silver are weighed with the Cologne mark of 3608 troy grains.

Money.—Accounts are stated in marks of 16 schillings, each of 12 pfennings Lubec currency or *Lubs*. The mark, valued at the rate of 34 to the Cologne mark weight of fine silver, is equal 1s. 2¼d.; and 16 marks 11¾ schill. = £1. The dollar contains 3 marks. Foreign exchanges are transacted through the medium of Hamburg, in marks banco, the agio on which, compared with Lubec currency, is usually about 23 per cent.

Finances.—The public revenue is about 750,000 marks: the debt in 1836 amounted to 5,500,000 marks, but it has since been reduced.

Duties.—On imports, ½ per cent. *ad valorem*; on exports, *nil:* the transit duty is from ¼ to ½ per cent.

Treaty with Britain.—Since the article HAMBURG was written, a treaty supplementary to the one described under that head has been published, which provides for a more liberal intercourse than formerly with the Hanse Towns. It is dated London, August 3, 1841.

Art. 1. Provides that all British vessels entering the Hanseatic ports from countries not the dominions of Britain, shall not pay other or higher dues than are exigible on Hanse vessels in similar circumstances; and the duties on their cargoes shall be the same as if such cargoes had been in Hanse vessels. On the other hand, Hanse vessels from Hanse ports shall be admitted to the ports of all British possessions, on payment of the same dues as are exigible on British vessels in similar circumstances; and the duties on their cargoes shall be the same as if such cargoes had been in British vessels.

Art. 2. Britain likewise agrees that all goods, the produce of the Hanse states, the other German states, or of the German Customs Union, which may be imported in any foreign vessel from the Hanse ports, or any port on the Elbe or Weser, into the ports of the British possessions abroad, including Gibraltar and Malta, shall also be permitted to be imported from the Hanse ports into those of said B. P. abroad, in Hanse vessels; and such goods imported into, and all goods exported to any foreign country whatever from the ports of said B. P. abroad, in Hanse vessels, shall pay the same duties as if they were imported or exported in British vessels.

LUCCA, an Italian duchy, situated on the W. coast, immediately N. of Tuscany. Area, 420 square miles; population, 168,198. The capital, which bears the same name, has a population of 24,092. Government, an absolute monarchy.

The country is naturally divided into the Apennine region; the valley of the Serchio, including the highly cultivated plain of Lucca; and the coast district, in part marshy, but producing good pasture. Owing chiefly to the minute subdivision of land, there are no fewer than 25,000 petty proprietors, and from this circumstance the country is the most densely peopled of Italy, and indeed of Europe. The Lucchese are, however, industrious and shrewd; and many of them emigrate to foreign lands, where they work as stucco-image and plaster-cast makers. The duchy, though mainly agricultural, possesses a few manufactures of silks, woollens, cottons, linens, paper, and iron. Its commercial intercourse is principally with Tuscany, especially Leghorn, between which place and the town of Lucca, by way of Pisa, a railway is in progress. Exports, mostly olive-oil (the best in Italy), with silk, timber, chestnuts, and fish. Imports, grain, seeds, wines, spirits, cattle, hemp, flax, cottons and other manufactured goods, tropical produce, salted provisions, and pig-iron. "The export trade," says Dr Bowring, "is about four millions of francs (£160,000); that of oil amounts to 800,000 fr., and that of fresh fish gives to the district of Viareggio an annual sum of 250,000 fr. The imports nearly balance the exports; but considerable quantities of bullion enter the duchy in payment of articles, of which (from their not being charged with export duty) no account is kept at the customhouse."—(*Report on Italian States*, p. 66.) The only port is Viareggio, which possesses a roadstead frequented by coasting-vessels.

MEASURES, WEIGHTS, MONIES, &c.

Measures and Weights.—The woollen braccio = 23·8 Imp. inches; the silk braccio = 22·8 Imp. inches; 4 braccia = 1 canna. The oil coppo, reckoned generally at 24 lbs. peso grosso = 21·97 Imp. gallons. The wine measure is the Leghorn barile of 20 fiasci. The corn staja = ¾ Imp. bushel. The pound = 5213½ troy grains; but the pound "peso grosso" = 11 Leghorn lbs. = 8·234 lbs. avoird.

Money.—Accounts are generally stated in Lucchese lire of 20 soldi, each of 12 denari di lira. Payments are made chiefly in the money of Tuscany; and 6 lire 6¼ soldi of Lucca are reckoned equal to the Leghorn pezza of 8 reals. Foreign exchanges and the usances of bills are regulated entirely by the custom of Leghorn.

Tradesmen sometimes reckon in gold crowns (*scudi d'oro*) of 20 soldi, each of 12 denari d'oro. The gold crown = 7½ lire.

Principal Duties.—Cotton and linen manufactures, 10 per cent. *ad valorem*; cotton twist, L3 per 100 lbs.; woollens and hardware, 12 per cent.; coffee and loaf-sugar, L15 per 100 lbs.; brown sugar, L8 per 100 lbs.

Finances.—The state revenue is about £80.000. There are no public debts beyond pensions, &c.

LUGGER, a vessel with two or three masts, up and down which lug-sails are made to traverse, so that they may be readily set or taken in without going aloft. Slight, quick-sailing craft of this kind were used as privateers by the French in the last war. On the E. coast of England strong-built luggers are much employed in the herring and mackerel fishery.

LUMBER, a term applied, chiefly in America, to timber through all its preparatory stages, from its growing in the woods until it be put into the hands of the artificer for the purpose of being worked up. It occurs principally in the form of scantling, deals, inch-thick boards, clap-boards, shingles, staves, and hoops. Varieties of pine constitute the great bulk of what is usually denominated lumber in British America.

LUSTRE, a plain silk and worsted fabric, similar to poplin.

LUTESTRING, a plain, stout, silken fabric, forming, with gros de Naples, of which indeed it is merely a fine kind, " the staple of silks."

LYCOPODIUM, an inflammable powder used in fireworks, obtained from a common moss-like plant of the same name.

M.

MACAO, a Portuguese settlement in China, lying in lat. 22° 12′ N., long. 113° 34′ E., on the west side of the entrance of the Canton river, on a peninsula projecting from a small territory separated from the continent by river-channels. Circuit about 8 miles. Population said to be 30,000, mostly Chinese. It is jointly ruled by Portuguese officers and a Chinese mandarin,—the latter possessing, however, all the real power.

This place was granted to the Portuguese in 1586, in return for assistance afforded by them against pirates that had infested the coast; and it was at one time the centre of their intercourse with China, Annam, Siam, and Japan; but having suffered from that supine sloth which has involved all their Eastern empire, its trade is now quite inconsiderable. Of late, its chief or rather sole importance has been derived from its containing the dwellings of the Europeans trading with Canton, at which place they are only allowed to reside during the tea-season. Even at Macao the Portuguese and other strangers are jealously watched by the Chinese, who have a fortified barrier across the isthmus, beyond which foreigners are not allowed to pass. A ground rent of 500 taels per annum is paid for this settlement by the Portuguese to the Chinese government, which, besides, levies a duty on the shipping. [CHINA.]

MACCARONI is composed of wheaten flour, flavoured with other articles, and worked up with water into a paste, to which, by a peculiar process, a tubular or pipe form is given, in order that it may cook more readily in hot water; that of smaller diameter than maccaroni (which is about the thickness of a goose-quill) is called *vermicelli*, and when smaller still, *fedelini*. The finest is made from the flour of the hard-grained Black Sea wheat. Maccaroni is the principal article of food in many parts of Italy, particularly Naples, where the best is manufactured, and from whence also it is exported in considerable quantities. In this country maccaroni and vermicelli are sometimes used in soups.

MACE (Du. *Foely*. Fr. *Macis*. Ger. *Muskatenblüte*. Por. *Marcis*), a spice composed of the membranous tunic or covering investing the black shell in which the nutmeg is contained, and is first disclosed on the fruit ripening and bursting. When good it is thin, flexible, oily, of a bright reddish-yellow colour, has the spicy odour of the nutmeg, but more pungent; and an aromatic, bitterish, acrid taste. That which is brittle, pale, and of little smell or taste, is to be avoided. Mace, though chiefly used for culinary purposes, is occasionally employed medicinally as an aromatic and stimulant. About 20,000 lbs. are annually entered for home consumption. [NUTMEG.]

MACHINERY for cotton-spinning and weaving is constructed on a great scale at Manchester; flax-mills at Leeds; marine steam-engines at Glasgow; and woollen and lace machines, locomotives, and an innumerable variety of other articles, at many places in Britain. We possess no means of computing the total extent of these manufactures; but in a late Report by a Committee of the House of Commons on the exportation of machinery (*Par. Paper*, 1841, p. 230) it is estimated that in eleven towns in Lancashire there are 115 mechanical establishments, which have of capital invested, £1,515,000; and of horse-power, 1811; the whole capable of employing 17,382 hands. The trade owes its origin mainly to the discoveries of Hargreaves, Arkwright, Crompton, Watt, and Cartwright; and it is sustained almost wholly by the demands created in different branches of industry by these inventors, and others in the same walk, within our own country, as the exportation of machinery (excepting engines and common mill-gear) has from an early period been jealously prohibited, or restricted within narrow limits, with the view of protecting the home manufacturers. This began in 1696, by the prohibition of Leas' stocking-frame; other acts were passed in 1750 and 1774; after which the system appears to have been in much favour, as prohibitory acts then followed each other with great rapidity, and descending in some cases to very trifling objects. The existing enactments will be found under the head CUSTOMS REGULATIONS (3 & 4 Wm. IV. c. 52, § 104); but, in pursuance of the recommendation of a Parliamentary Committee in 1825, a discretionary power of relaxing the law was in that year given to the Board of Trade, upon whose report an export-license (subject to a fee of £2, 2s.) is issued by the Treasury. The former decides upon each application to export according to its merits; and the rule adopted is described by Mr J. D. Hume, their former secretary, as follows:—"The license is freely given for all processes that are merely for dressing and preparing the fibrous substance, wool, cotton, flax, or silk; that while this substance remains only as a quantity of cotton or a quantity of wool, the prohibition is kept back and not allowed to apply; but that in the case of any machine which once takes the very first movement to the dividing of this substance preparatory to the spinning, the prohibition has been strictly enforced, and no license ever given. The retained part, therefore, is that which applies to the spinning or the dividing of the substance for the purposes of spinning; the handing it over, as it were, to a spindle to be spun."—*Ibid.* p. 4.

The policy of still farther opening up the export-trade has been much discussed, more especially since the Report of the Committee of the House of Commons in 1841. This committee did not state any opinion upon the subject; but they laid before Parliament a mass of evidence, adduced from experienced customhouse officers, manufacturers, and engineers, which renders it no longer doubtful that "the mounds and fences" by which the shipment of machinery is restrained, are not only futile and unnecessary, but hurtful. It is shown to be impossible to prevent the illicit exportation of the forbidden kinds, more especially of the important parts, which are almost all of a minute description, and in separate pieces, such as bobbins, spindles, and rollers; further, that the prohibitory system, serving as a *bonus* to foreign machine-making, has tempted capitalists to embark in the trade; and Belgium, and many parts of Germany, France, Switzerland, and the United States, now abound in machine-factories, full of British tools, superintended by British workmen, and supplied early and systematically with drawings, models, or model-machines, as may be deemed best, of all new and improved apparatus; by which means the mechanists of those countries—Belgium especially—not only supply in most departments the home demand, but are beginning to export to Russia and to S. America. In this way British inventors are compelled either to erect works abroad, or to enter into engagements with existing establishments for the supply to the Continent of their prohibited inventions, and enormous loss is inflicted on the field of labour of this country, which, but for these restrictions, would, from its natural and acquired advantages, have been the machine-shop of the world. It is likewise shown that many other facilities besides the possession of improved machinery, require to be blended and enjoyed by foreign manufacturers before they can rival those of Britain; such as highly skilled, steady, and persevering artisans—minute subdivision, with at the same time combination and compactness of labour—contiguity of manufactories to the machine-shops, and the interchange of ideas thereby occasioned—the proximity of a cheap and plentiful supply of fuel and iron—the best markets for the raw material, and extended demand for manufactures—abundant capital—the first use of inventions—and, above all, security of property and freedom of industry.

The declared value of the shipments of machinery and mill-gearing in 1822 was £116,220; in 1825, £212,420; in 1830, £208,767; in 1835, £307,951; and in 1840, £593,064. This last sum included £294,148 for steam apparatus sent principally to France, Germany, and other parts of the European continent, and to India; £227,672 for all kinds of mill-work and machinery allowed to be exported by law, shipped generally to most parts of the world; and £71,244 for machinery exported under license, and sent chiefly to Germany, Russia, Belgium, and France.

The importation of foreign inventions is encouraged by the allowance of a patent for a limited time to the first user.

MACKEREL, a fish (*Scomber scombrus*) well known for its beauty and its intrinsic value as an article of food. It is caught on some parts of our coast in every month of the year, but those taken in May and June are generally preferred. They are found in abundance on the south and south-east shores of England; and the mackerel season at the various fishing towns is one of great bustle and activity. They are plentiful on the Devonshire coast, and swarm in West Bay about June. On the Hampshire and Sussex coasts they generally arrive in March. At Lowestoff and Yarmouth, the great harvest is in May and June. Their ordinary weight is about 2 lbs. each. The largest are not considered the best. They require to be eaten very fresh, as they soon become unfit for food; and on this account they are allowed to be cried through the streets of London on Sundays,—a practice which has prevailed since 1698. During the season, about 100,000 are brought to Billingsgate in one week. A last of mackerel is 10,000.

MADAGASCAR, a large island lying between lat. 12° and 25° 45′ S., about 240 miles distant from the E. coast of Africa, from which it is separated by the channel of Mozambique. Area, about 225,000 sq. miles. Population vaguely estimated at 5,000,000, composed of numerous tribes, one of which, the Ovahs, exercises a nominal sovereignty over the whole.

The island contains extensive and fertile plains, interspersed with mountainous districts, which render the climate of the interior milder than might be expected from the latitude; but the coast, being generally low and in many places swampy, is oppressively hot and unhealthy. The inhabitants are almost all naked barbarians, except the Ovahs, who possess a civilisation akin to that of the Javanese; and many European arts were introduced among them by King Radama, an energetic reformer, who died in 1828. The chief places of commercial resort are Bembatooka Bay, on the W., and Tamatave on the E., from whence rice, cattle, tortoise-shell, amber, &c. are sent to Mauritius. The French have settlements on the Isle St Marie, and at Foul Point Bay, St Luce Bay, and Fort Dauphin, where they cultivate sugar and coffee for exportation to Bourbon.

MADDER (Du. *Mee, Krap*. Fr. *Alizari, Garance*. Ger. *Krapp, Färberröthe*. It. *Robbia*. Sp. *Granza, Rubia*), a cheap, durable red dye, obtained from the root of a trailing plant (*Rubia*), cultivated in Alsace and Provence in France, especially near Avignon, in Dutch Zealand, Asiatic Turkey, and in Italy; from which places it is largely exported. The Turkey and Provence madder is procured from the variety termed *Rubia peregrina*; the remainder from the *Rubia tinctoria*. The substance contains at least two distinct colouring principles, a fawn and a red; yielding two tints, namely, *madder-red*, which contains the whole of the colouring matter, and *Turkey-red*, the superior brilliancy of which arises from the red portion being alone preserved. Madder is extensively used for dyeing calico, linen, and woollen cloth, and in the preparation of madder-lakes. The roots are taken up at the end of September and kiln-dried. The best are about the thickness of a goose-quill, semi-transparent; when broken, of a reddish colour, verging towards purple, possessing a strong smell, and having the bark smooth: a yellow hue indicates inferiority. The importations from Turkey (*via* Smyrna) and Italy consist entirely of the roots in their natural state; but the whole of the Zealand madder, and the greater part of the French, is shipped in the state of powder. In Zealand, previous to grinding, the roots are carefully assorted: the interior bright part of the finest makes *crop*-madder; *ombro* is prepared from good roots not peeled; *gamene* is the ordinary powder; and *mull*, made from peelings and refuse, is an inferior sort used for cheap dark colours. In France, it is prepared nearly in the same manner. Madder may be preserved a long time, but being injured by moisture, which it readily absorbs, it should be kept in a dry place.

The importations of this commodity for home consumption have been doubled within the last ten years, and now rather exceed 200,000 cwts.; about one-half being in the form of powder, and the remainder the roots in their natural state. The former is brought wholly from France and Holland; the latter principally from Turkey, and in smaller quantities from Italy and France. Small parcels of madder are also brought from Spain. [MUNJEET.]

The following extract from the London Price Current of February 1842, gives a comparative view of the estimation in which the different kinds are held in the British market:—

Madder Roots.—Turkey, £2, 8s. to £2, 10s. per cwt.

Madder.—Dutch, crop, per cwt., £3, 5s. to £4, 10s.; Ombro, £2, 8s. to £3; Gamene, £1, 10s. to £2; Mull, 7s. 6d. to £1; French, £2, 10s. to £3, 5s.; Spanish, £1, 8s. to £1, 15s.

MADEIRA, a fertile and beautiful island belonging to Portugal, lying about 450 miles W. from the coast of Morocco. Area, 300 sq. miles. Population, including Porto Santo, about 112,500. Funchal, the chief city and port, pop. 20,000, is the residence of the governor of this island and of the adjoining islets, Porto Santo and Desertas.

Madeira consists of one large mountain, with branches rising every where from the sea towards the centre of the island. The climate is very mild and healthy; the mean temperature of the year not exceeding 65°. Vines form the chief object of cultivation, and large quantities of the wine produced are exported, particularly to England, where its consumption was facilitated by the Methven treaty [WINE], and to the United States. A tenth part of the whole is taken for taxes; the rest is divided between the proprietor and farmer. The growth of the island was formerly estimated at 30,000 pipes, but it does not now exceed 18,000, of which only the better sorts are exported, the remainder being made into brandy for the Brazils, converted into vinegar, or used at home. This decline, attributed partly to the frequency of adulteration, and partly to the preference given to sherry and French wines, has led to a great part of the soil being applied to other purposes. The culture of potatoes and other provisions has been extended on the higher grounds. The planting of coffee has also become very general in the island, and with considerable success. The sugar-cane has been tried, but does not repay its expense.

The only port is *Funchal*, in long. 17° 6′ W., lat. 32° 37′ N., an irregularly built, dirty town, situate in the centre of a large bay. It is strongly fortified, but has no harbour, and the roadstead is not secure, especially in winter. The merchants are chiefly English.

The exports, amounting annually to about £240,000, consist principally of wine, with fruits, dragon's-blood, honey, wax, orchil, tobacco, and ship-provisions. The imports are chiefly cottons, woollens, and other manufactures from Britain; sheep, salted provisions, fish, oil, timber, and corn; with tropical produce of different kinds from United States, Portugal, Genoa, and other places. About 50,000 tons of shipping enter the port annually, of which about 3-5ths are British.

Measures and Weights in general those of Portugal; but 23 corn alquieres of Madeira equal 24 of Lisbon; and 12 wine almudes of Madeira equal 13 of Lisbon. *Money* accounts are kept in milreas, each equal to the Spanish dollar. In exchanges the milrea is converted into sterling at a nominal or assumed par of 58 pence, allowing a premium for bills on London, varying from about 25 to 30 per cent. *Import duty*, 20 per cent. on all articles except provisions.

MAGNA GRÆCIA WARE, a term applied by customhouse officers to Etruscan vases, urns, and other kinds of ancient pottery.

MAGNESIA, a well-known medicinal earth, commonly obtained by burning the carbonate of magnesia, whence it is sometimes called *calcined magnesia*. It is a white, soft powder, and possesses neither taste nor smell. The carbonate of magnesia is found in a natural state in Piedmont, Moravia, Hoboken in N. America, and in the East Indies, but it is usually manufactured from the bittern of sea-salt works. It is a white, light powder, resembling the pure earth, but possessing only about one-half of its strength.

MAGNET, a combination of the protoxide and peroxide of iron. [COMPASS.]

MAHOGANY (Sp. *Caoba*), the timber of a stupendous tree, of which there are several varieties, the principal being the *Swietenia mahagoni*, a native of the West Indies and Central America, and found in luxuriant condition in the rich valleys among the mountains of Cuba, and those that open upon the bay of Honduras. It is supposed to take about 200 years to arrive at maturity. This wood was first introduced into England in the beginning of last century, since which, though costly, it has become the principal timber for furniture and cabinet making, having entirely supplanted the walnut, formerly in general use for the same purposes. From 20,000 to 25,000 tons are now annually imported into Britain; three-fourths of which are brought from Honduras, and the remainder from Cuba and Hayti.

The timber is best upon the coldest soils and in the most exposed situations. When it grows upon moist and warm lands, it is soft, coarse, spongy, and contains sap-wood, into which some worms will eat. That which is most accessible at Honduras is of this description; and therefore it is only used for coarser works, or for a ground on which to lay veneers of the choicer sorts. When grown among rocks and much exposed, the size is inferior; but the timber is superior in strength, and the colour is richer. "Since the produce of Jamaica has been nearly exhausted, there are only two kinds known in the market,—Bay-wood, or that which is got from the continent of America, and Spanish-wood, or the produce of the islands, chiefly of Cuba and Hayti. Though the Bay-wood is inferior to the other, both in value and in price, it is often very beautiful, and may be obtained in logs as large as six feet square. It is, however, not nearly so compact as the other; the grain is apt to rise in polishing, and, if it be not covered by a water-proof varnish, it is very easily stained. It also gives to the tool in carving, and is not well adapted for ornaments. Spanish-wood cuts well, takes a fine polish, resists scratches, stains, and fractures much better, and is generally the only sort upon which much or delicate workmanship should be expended."—(*Lib. of Ent. Knowledge: Veg. Substances*, vol. i. p. 151.)

There are two East Indian species, but they are not imported in any quantities into this country: The *S. febrifuga*, likewise a gigantic tree, grows in the mountainous parts of Central Hindostan; its wood is of a dull red colour, hard, heavy, and durable: and the *S. chloroxylon*, a smaller tree, found in the mountains of the Circars; its wood is of a yellow colour, resembling box.

MAIZE, OR INDIAN CORN (*Zea Mays*), the most productive, and at the same time the most unequal in its produce, of all the grains. The ears consist of a cylindrical substance, over which the seeds are ranged in eight or more straight rows, each of thirty or forty grains. The prevailing hue of the corn is yellow of various shades. The produce varies in the same field, according to the season, from 40 to 200 or 300 for one. Fertile lands usually afford a return of 300 or 400 fold. Maize does not suffer from cold until the mean temperature falls to 45°, and no heat is injurious to it. It forms a principal food in the United States, Mexico, Africa, and some parts of the East Indies. In the East it is considered as an inferior grain, and bears the same rank in relation to rice that oats or barley does to wheat in Britain. A small variety is partially cultivated in the south of Europe; but the attempts made to introduce it into this country have been unsuccessful.

MALACCA, a settlement of the East India Company, extending about 40 miles along the shore of the Malay peninsula, by 30 inland. Area, 800 sq. miles. Population, 22,000, chiefly Malays. The town is in lat. 2° 14′ N., and long. 102° 12′ E.; pop. 12,000. The government is vested in a resident, deputy to a chief resident at Singapore.

Malacca was taken from the Dutch during last war, and restored at the peace in 1815; but in 1825 it was received from them in exchange for settlements in Sumatra. It is not a place of much value. The soil is deficient in fertility; and its foreign trade has been supplanted by the two great emporiums in its neighbourhood, SINGAPORE and PENANG. The climate is reckoned healthy, Fahrenheit ranging only from 72° to 85°. The productions are tin and fruit, with a little gold. Provisions are cheap. Large ships anchor about 1¼ mile from the town.

Measures and Weights.—The covid = 18¼ Imp. inches. The Malay pecul of 100 catties = 135 lbs. avoird.; 3 peculs = 1 bahar; the last of 50 measures or 500 gantons = 29 cwts. avoird. nearly; the coyan of rice or salt is 40 peculs; the kip of tin is equal about 40½ lbs. avoird. Gold and silver are weighed by the buncal of 832 troy grains. *Money* accounts are stated in Spanish dollars of 100 cents, which form the general currency of the "Straits." A variety of Indian and Dutch coins are also in circulation.

MALT, barley-corn which has been subjected to artificial germination, and then dried in a kiln, processes by which its farina is mellowed or sweetened, and so fitted for the purposes of the brewer. [BEER.] The first operation is that of *steeping* the grain in water, when it absorbs moisture, softens, and swells; it is then subjected to *couching* and *flooring*, by which it becomes warm and sweetens, and germination is allowed to proceed until the acrospire, or rudiment of the future stalk, is ready to burst the shell, at which stage it has acquired its maximum of saccharification. It is then *kiln-dried* at a low or high heat, according as it is wanted to be pale, amber, or brown. The pale or amber malt, the only kinds which yield the saccharine or fermentable extract, should, when good, be compact but friable, white and mealy in their fracture, of an agreeable somewhat pungent smell, not smoky, and of a pleasant sweet taste. The brown malt is not fermentable, but is employed to impart flavour. Besides these there is black or patent malt, a roasted kind, employed instead of burnt sugar merely to colour porter. Malting is not usually conducted during summer, because in hot weather the grain is apt to become mouldy.

The quantity of malt consumed in England has been long very considerable; but it has not increased in a degree proportional to the increase of the population, —a circumstance attributed partly to the more general use of tea, coffee, and other beverages, and partly to the higher price of malt liquors arising from the augmented duties on malt and beer, and the limited supply to be obtained in this country of fine barley suited for malting. Thus the quantity charged with duty in England was, in 1703, 26,754,505 bushels; in 1750, 29,284,786 bushels; in 1790, 21,976,959 bushels; and in 1810, 23,546,346 bushels. Little difference occurred in these quantities until of late years, when a stimulus was given to consumption by the reduction of the duty on malt in 1822, and still more by the abolition in 1830 of the beer duties, as will be seen by the following table, which shows the quantity of malt charged with duty, and the amount of revenue received thereon in various years since 1820, in the different divisions of the kingdom:—

Years.	England.	Scotland.	Ireland.	Total.	Net Duty.
	Bushels.	Bushels.	Bushels.	Bushels.	£
1820	23,884,242	1,182,208	1,793,671	26,860,121	5,088,195
1825	29,572,741	3,925,847	2,706,862	36,205,450	4,384,163
1830	26,900,902	4,101,946	1,959,606	32,962,454	3,436,271
1835	36,078,856	4,459,553	2,353,645	42,892,054	5,499,883
1836	37,196,997	4,903,187	2,287,535	44,387,719	5,699,879
1837	33,692,356	4,583,446	2,275,347	40,551,149	5,216,967
1838	33,823,985	4,419,141	2,262,440	40,505,566	4,932,080
1839	33,826,016	4,360,373	1,744,552	39,930,941	4,845,949
1840	36,653,440	4,397,304	1,406,112	42,456,856	4,983,602
1841					

Of the sixty excise "collections" into which England and Wales are divided, the ten following are those from which the largest amount of malt duty is obtained:

Leeds, Suffolk, Bedford, Cambridge, Hertford, Surrey, Grantham, Norwich, Essex, and Lincoln.

The Duty on malt in England was first imposed in 1697, when it was fixed at the rate (reckoned in Imperial measure) of 6¼⅞d. per bushel; which, in 1760, was increased to 9¼ $\frac{3}{11}$d.; in 1780, to 1s. 4¼d.; in 1791, to 1s. 7¼d.; but in 1792 it was reduced to its former rate of 1s. 4¼d.; in 1802, it was increased to 2s. 5d.; in 1803, to 4s. 5¾d.; in 1816, it was again reduced to 2s. 5d., which rate lasted only till 1819, when it was raised to 3s. 7¼d.; in 1822, it was fixed at 2s. 7d. per bushel; since which no alteration has been made.

In Scotland, the duty commenced in 1713, and in Ireland in 1785; and after various fluctuations was fixed, in 1822, in both countries, at 2s. 7d., as in England,—that made from bere or bigg, however, being only 2s. per bushel.

The charging and collection of the duty are regulated by the acts 7 & 8 Geo. IV. c. 52, 53, and 81; 11 Geo. IV. c. 17; and 7 & 8 Wm. IV. and 1 Vict. c. 49. By the first-mentioned act every person making malt is required to *enter* his premises and utensils with the excise. An individual residing in a remote part of any collection, and making malt solely for domestic use, may be entered as a *by-maltster;* but the excise officer must take a gauge of each steeping, after which his surveys are not required to be made oftener than once a-week, until the grain is dried off. If malt be made for private use in considerable quantities, the person making it ceases to be considered a by-maltster.

The act 7 & 8 Wm. IV. and 1 Vict. c. 49, § 9, fixes the following allowances to be made for the increase in the several gauges, in consequence of the swell of the corn; namely, while the grain is in the cistern, or in the couch, or directed to be deemed so, an allowance of 18¾ bushels per 100; when the grain is on the floor, or on the kiln, after the expiration of 26 hours, if it has been previously gauged, or if it has not been so after the expiration of 30 hours, an allowance of one-half; the duty to be charged on the best gauge.

For the other regulations we must refer to the acts themselves. [CORN.]

MALTA, an island possessed by Great Britain in the Mediterranean, about 60 miles S.S.W. of Sicily. Extreme length, 17¼ miles, and breadth, 9¼ miles. Area, 95 sq. miles. Population in 1839, 105,456, including 5204 British, and 4661 aliens. The local government is vested in a military commander, who, in legislative matters, is assisted by a council of six persons nominated by the crown.

The S. coast is rocky and inaccessible, but the ground slopes from thence to the N. side, and the island is in general flat. It possesses no rivers, and few springs; and its aspect is sterile. About one-half of the whole surface, however, has been subjected to cultivation. The staple produce is cotton; the chief other productions are wheat, barley, pulse, fruit, especially oranges, potatoes, salt, and cummin seed; but the grain raised is equal only to about one-third of the consumption, and very few cattle or sheep are bred. Imports, chiefly wheat and other grain from the Black Sea and Sicily; British manufactures; sugar, coffee, and leaf tobacco; live-stock, chiefly from Africa; oil and wine from Sicily and Italy; spirits, wood, coals, and cheese, with a variety of other articles; the whole amounting annually to about £600,000. Exports, cottons, sail-cloth, and yarns of Maltese manufacture; also cabinet-work, gold and silver filigree work, and cut-stone, segars; with reshipments of colonial produce, grain, British manufactures, and wine; the whole amount being from £300,000 to £400,000. About 1800 vessels annually arrive, having an aggregate burthen of 190,000 tons; of which, however, 680 vessels, burthen 13,000 tons, consist of small craft chiefly trading with Sicily. The Maltese are expert carpenters and active seamen; and shipbuilding is on the increase, the vessels being registered as British: about 1600 tons were built in 1839.

La Valetta, the port, citadel, and seat of government, lies in lat. 35° 54′ N., long. 14° 31′ E., on the N.E. coast, on a narrow neck of land forming two harbours, the whole of which is defended by stupendous fortifications. The northern harbour is solely appropriated to the purposes of quarantine. The Southern or Grand Port is large, safe, and commodious, running up 1¾ mile in a S.W. direction; and the shore is so bold that a line-of-battle ship may lie close to it. On the Valetta side, it is one continued line of wharfs for the accommodation of merchantmen. Population, including the three districts of Cospicua, Vittoriosa, and Senglea, on the opposite side of the harbour, about 50,000. Provisions are abundant and cheap, and water is supplied from tanks. The climate, though warm, is in general salubrious, especially between October and May. The "sirocco," or S.E. wind, which mostly prevails in September, is oppressive and enervating; though the "gregale," or N.E. wind, in winter, is that which blows with the greatest fury.

Malta was a place of great importance during last war, having become the emporium of that commerce which was shut out from the Continent by the operation of the Berlin and Milan decrees; but it received a sudden interruption from the plague, which broke out in 1813; and the quarantine regulations afterwards maintained in Italy and France on vessels arriving from the island, operated for a long time most prejudicially to trade. In 1826, these restrictions were repealed. More recently, Valetta has been made a free port,—a circumstance which, joined to its being the principal British naval station in the Mediterranean, as well as the most advantageous point of rendezvous for steam-vessels plying between Italy, France, and England, and the Levant, to supply themselves with coals, render it of great importance both in a political and commercial view. The island, it may be observed, likewise promises to become an extensive *entrepôt* for the corn of the Black Sea and Mediterranean, no less from its central position than from its *caricatori*, which, being excavated in the rock, are admirably adapted for the safe keeping of grain.

Gozo, *Comino*, and *Filfla*, are islet dependencies of Malta. The first, 10 miles long, by 5¼ in breadth, has a population of 16,472; but it has no port, and is only approachable by small craft.

MEASURES, WEIGHTS, MONIES, &c.

Measures and Weights.—The canna of 8 palmi = 82 Imp. inches, but 3½ palmi are commonly reckoned equal to 1 yard. The salma of land of 16 square tumoli = 4·44 Imp. acres. The barile of wine = 9½ Imp. gallons; the caffiso of oil = 4⅝ Imp. gallons; and 2 caffisos = 1 barile of oil. The salma of corn (stricken measure) = 7¼ Imp. bushels.

The cantaro of 100 rottoli or pounds = 174½ lbs. avoirdupois, but is commonly reckoned at 175. The pound of 12 ounces, used in weighing gold and silver = 4886 troy grains.

Money.—Accounts are kept by the government in sterling, but by the mercantile classes in scudi of 12 tari, each of 20 grani. 2½ scudi = 1 pezza or Sicilian dollar = 47½d. valued in silver, or 49½d. in gold; but is commonly estimated at 4s. 2d., and the Maltese scudo at 1s. 8d. The other monies consist chiefly of Spanish and American dollars, and of British silver and copper. Notes are issued by two banks (established *en commandite*), but only to a small extent, not exceeding £20,000; while the coin in circulation is estimated at £150,000.

Bills on London are commonly drawn at 30 and 60 days' sight; and the ordinary fluctuations of the exchange are from about 48½d. to 50d. per pezza.

The Revenue averages £100,000 per annum; of which, derived from crown property, £28,000; corn duty, £30,000; customs and port dues, £14,000; excise, £16,000; quarantine dues, £5000; judicial fees, £4000; minor taxes, £3000. The customs and port duties and warehouse rent are exceedingly small, imposed for the sake of revenue only, and without regard to the country from whence the vessels arrive.

The importance of Malta began in the 16th century, when it was ceded by Charles V. to the Knights of St John of Jerusalem. In 1798, after a mere show of resistance, it was taken by Napoleon; and in 1800 it was reduced by the United British and Maltese by blockade.

MALTER, a German corn measure, varying in different places.

MALTHA, a variety of bitumen supposed to be inspissated PETROLEUM.

MAN, ISLE OF, is situated between Cumberland and the N. of Ireland. Area, 220 sq. miles. Population in 1841, 47,985. It was long held in feudal sovereignty by the Earls of Derby, descending from them to the Dukes of Atholl, from whom it was purchased in 1765; the island retaining, however, most of its peculiar laws. The administration is vested in a governor and council, and the "House of Keys," a self-elected body; the whole forming what is called the Court of Tynwald.

The island is intersected by a ridge of mountains which run from N.E. to S.W., and many parts of the coast are rocky; but there is still a considerable extent of level territory, though no part is very productive, and improvement has been retarded by the division of the land into small farms. Of late, however, the decay of the herring-fishery has led to more attention being given to agriculture, the advancement of which is facilitated by the quantity of sea-weed fitted for manure which is thrown upon the shores; while the industry of the islanders has been promoted by improved fiscal regulations, and their increased intercourse with Liverpool, Glasgow, and other places, since the development of steam-navigation. The exports consist principally of grain, potatoes, eggs, lime, lead and copper ore, herrings, linen, and paper, mostly all sent to Liverpool.

Douglas, on the S.E. coast, is the only port of consequence.

CURRENCY, DUTIES, &c.

Manx Currency is in value ⅐th less than that of Britain,—the British shilling being reckoned at 14 Manx pennies, or £100 sterling = £116, 13s. 4d. Manx; but by act of Tynwald of Nov. 8, 1839, all transactions are now held to be in sterling. Measures and weights are now also reckoned by the Imperial standards.

A joint-stock bank has been established, with a paid-up capital of £30,000.

The Duties in Man are in general considerably lower than those payable in Britain. The distinction led formerly to a great deal of smuggling; but this is now checked by allowing only certain quantities of those commodities which had been the subject of the contraband trade, to be imported into the island under a customs license. The existing regulations are embodied in the act 3 & 4 Wm. IV. c. 60; and the following are the principal duties, with the quantities of those goods admitted only under license:—

Coffee, 4d. per lb.; hemp, 1d. per cwt.; British hops, 1½d. per lb.; foreign spirits (20,000 gallons), 4s. 6d. per gall.; colonial rum (60,000 galls.), 3s. per gall.; colonial raw sugar (10,000 cwt.), 1s. per cwt.; bohea tea (70,000 lbs.), 6d. per lb.; green tea (5000 lbs.), 1s. per lb.; tobacco (60,000 lbs.), 1s. 6d. per lb.; wine (27,720 galls.), £16 per tun of 252 galls. for French, and £12 per tun other sorts; foreign timber and deals, 10 per cent. *ad valorem*.

Goods from U. K., and entitled to any drawback on exportation from thence, and not before enumerated, 5 per cent.; goods from U. K., and not herein before charged, 2½ per cent.; goods from any place whence such goods may be imported into Man, and not before charged, 15 per cent.

Exempted from duty: coals, flax, and flesh; British linen, hemp, cattle, utensils, bricks, tiles, salt, timber, &c. in British ships; and colonial naval stores, indigo, lumber, &c. if from U. K. in British ships.

Licensed goods must be imported into Douglas in British ships of 50 tons or upwards.

Foreign goods cannot be exported from Man to the U. K., § 11.

Foreign corn is subject to same duties as in U. K.

MANDATE. [PRINCIPAL AND AGENT.]

MANDIOC. [CASSAVA.]

MANGANESE, a very brittle metal of a dusky white colour, and without either malleability or ductility. Sp. gr. 8. The substance known in commerce under that name, however, is the peroxide, or black oxide, of the metal. It occurs native in the Mendip Hills in Somerset, and in the counties of Devon and Aberdeen. It is found in a variety of forms; most commonly it is of an earthy appearance, and mixed with other ingredients; but sometimes in crystals of a black colour and metallic lustre. Peroxide of manganese is largely consumed in the manufacture of bleaching compounds; it is also used by potters and glassmakers; and in the laboratory it is considered the cheapest material from which to procure oxygen.

MANGEL WURZEL, a species of BEET, used as winter food for cattle, a purpose to which it has been long applied in Germany, though its introduction into this country dates only from the end of last century. The plant is nearly of the same duration and habits as the turnip; and though the Swedish variety of the latter exceeds it, weight for weight, in the quantity of nourishment, yet, on good light soils, the produce of beet is much greater. In Guernsey, crops have been raised of 100 tons per acre.

MANGO, the fruit of the *Mangifera Indica*, sometimes imported from India as a pickle. It is kidney-shaped, of a delicious flavour, and contains a flattened stone. There are, however, many varieties.

MANHEIM GOLD, or *Similor*, consists of 3 parts of copper and 1 of zinc. A little tin is sometimes added, which, though it may improve the colour, impairs the malleability of the alloy. It is from this that the spurious leaf-gold, laces, and other articles, are manufactured.

MANILLA. [Philippine Islands.]

MANIFEST, a document containing a specific description of a ship, her cargo, and passengers; it is signed by the master at the place of lading.

MANNA, the concrete juice of the manna ash (*Fraxinus ornus*), collected principally in Calabria and Sicily. The best, called flake manna, is in oblong, light, friable pieces, of a whitish colour, and somewhat transparent, with a sweetish, sharp taste, and a weak smell. The inferior kinds are moist, unctuous, and dark-coloured. It is a mild aperient medicine.

MAPLE, a timber-tree, of which there are many varieties. The common British maple (*Acer campestre*), is a small tree, the wood of which is of little value, except to the turner, who makes it into cups, bowls, &c. The sycamore maple, called in Scotland the plane-tree (*A. pseudo platanus*), is chiefly used for coarse work where lightness and toughness are required. The sugar maple (*A. saccharinum*), abundant in N. America, is so called from the saccharine matter obtained by tapping its trunk in spring, and which in Canada is largely manufactured into sugar; its wood is hard, and has a satiny lustre, but being readily attacked by insects, it is not of much value, except when its grain is waved, and then it is in request for cabinet-work: the wood of old trees is esteemed for inlaying mahogany, and is termed *bird's-eye maple*.

MARBLE, the granular limestone, or carbonate of lime, of mineralogists, is a massive beautiful kind of stone, somewhat translucent, of various colours, and frequently veined or spotted. Sp. gr. 2·5 to 2·8.

Granular limestone is found in many, if not in most primitive countries; it sometimes forms entire mountains, but more often occurs in beds. The most celebrated statuary marbles of ancient times were found in the islands of Paros, Naxos, and Tenos, in the Archipelago. Parian marble is white, large grained, and considerably translucent. The Pentelicon, taken from quarries on a mountain called Pentelicus, near Athens, is traversed by greenish or grayish veins, which are commonly micaceous. The marble of Carrara has a finer grain and closer texture, and is that now usually employed by statuaries; the quarries of this marble are on the eastern coast of the Gulf of Genoa, and are worked on the face of a mountain to the height of about 800 feet.

Beautiful marbles for chimney-pieces and ornaments are found in various parts of the United Kingdom, and in other countries. In England, they are abundant in the counties of Derby, Devon, and Anglesea, the last being of a green colour; in Scotland, at Assynt, in Sutherlandshire; Ballachulish, in Argyllshire; and in the islands of Tiree, Skye, and Jura; in Ireland, in Kilkenny and other places. The Kilkenny marble is black, and encloses shells of a whitish colour, which, when cut, presents segments of circles. The Cotham, Ruin, or Landscape marble of Bristol, exhibits when polished the appearance of a landscape or ruins; it is common in the Val d' Arno, near Florence. The Lumachelli or Fire Marble, found at Bleyberg, in Carinthia, exhibits beautiful iridescent colours, which are sometimes prismatic internally, but more commonly of various shades of orange or red.

MARITIME LAW. [Master. Navigation. Seamen. Shipping, &c.]

MARK, the name given to a money of account in Hamburg, Lubec, Denmark, and Norway; to a weight, used chiefly for gold and silver, in different parts of the Continent, varying from about 3500 to 3700 troy grains; and to an ancient money of England and Scotland. [Coin.]

MARKET, a kind of minor Fair, usually held once or twice a-week in most towns, for the sale of provisions or live-stock. The following are the principal markets of the metropolis:—

Smithfield cattle-market is held every Monday morning; also, though on a smaller scale, on Friday. In Mr Knight's valuable work "London" (vol. ii. p. 325), the sales in 1839 are stated as follow:—180,780 cattle, 1,360,250 sheep and lambs, 254,672 pigs, 22,500 calves; and, taking the average weight of the cattle at 640 lbs., of the sheep and pigs at 96 lbs., and of the calves at 140 lbs., the total number of lbs. of meat is 273,881,712; which, at the average price of 6d. per lb., would amount to £6,847,042; while at 7d. it would be £7,988,216. Smithfield is the only cattle-market in London; but large quantities of "country-killed meat" are now sent up by steam-boats and railways, principally to the carcass-butchers of Newgate and Leadenhall markets. The graziers usually consign their animals to salesmen, whose drovers meet the country drovers at the outskirts of London. The salesmen charge 2s. 4d. for each "beast." The city derives a gross revenue of £6000, and a net revenue of £3000 a-year from the market.

A horse-market is held in Smithfield on Friday afternoon; and a hay and straw market on Tuesdays, Wednesdays, and Saturdays.

Mark Lane corn-market consists of two buildings. The first is a quadrangular paved court, surrounded by a colonnade, in which are seats for the corn-factors, who have each a desk containing samples. The second is a splendid Greek Doric building, which was erected in 1828 at an expense of £90,000. The interior consists of the sale-room,—a spacious and well-lighted hall, comprising the corn and seed markets, containing 82 stands for the factors. A hotel, coffeehouse, and reading-room are attached to the institution. The chief business is transacted here on Mondays, though Wednesdays and Fridays are likewise market-days. [Corn.]

Billingsgate fish-market, situated at the western extremity of the customhouse, is held daily; mackerel alone, however, being allowed to be sold on Sunday. Separate divisions are assigned for each kind of fish. From 4000 to 5000 fishing-vessels are annually entered at the customhouse. The cargoes are consigned to an intermediate class between the fishermen and the retail dealers, termed salesmen, who alone have stalls in the market, and who are obliged by the regulations to fix up in a conspicuous place a statement of the kind and amount of their stock. Their sale begins at 5 A. M., on the ringing of the market-bell, except that for oysters, which does not commence till 6 o'clock.

MARL, a mixture of limestone and clay, produced by the decomposition of shells in bogs and standing water. It is of a yellow or reddish-gray colour, and falls to pieces on exposure to the air. It exists in many parts of the United Kingdom, and is much used as a manure.

MARMALADE, a confection generally made of oranges boiled with sugar.

MARSH-MALLOW, a perennial indigenous plant common in marshes near the sea, but in some parts of the Continent cultivated for its root, which is used in medicine for all cases in which emollient or demulcent substances are required. The root is about the size of a finger, white, and carrot-shaped.

MASLIN, a mixture of rye and wheat. It is very extensively grown in Durham, where bread made of this compound is in general use. It is mixed in all proportions, from ⅛ of wheat to ⅞ of rye, and from ⅛ of rye to ⅞ of wheat, according to the soil.

MASSICOT, an oxide of lead prepared from the dross of the melted metal. It is of a pale yellow colour, and is used as a pigment.

MASTER OR CAPTAIN OF A SHIP is the person put in charge and command of a ship during her voyage. The master of a British ship must be of the class of persons pointed out by the act for the encouragement of British shipping (3 & 4 Wm. IV. c. 54, § 16). [Navigation.] The master is an agent [Principal and Agent], with ample powers to represent the owners in the management of the concerns committed to him. They are liable for such engagements as he may enter into for the necessary and usual employment of the ship, and for such acts as he may do in his character of master within this limit. If the owners themselves appear, and make a special contract regarding the service of the ship, the master cannot substitute another on his own authority. Where the authority of the master is questioned, the law on the subject will generally be influenced by the custom of merchants. Charter-parties [which see] are generally the sole act of the owners themselves; but the master may be empowered to enter on a charter-party, and to bind the owners; and when he is abroad, this right is inherent in his office. In the case of a general ship, the owners rarely interfere to regulate the engagements with the particular merchants who furnish the cargo, and they are undoubtedly bound by every engagement made by the master relative to the usual employment of such a vessel. When the master binds the owners to repay money borrowed to accomplish repairs, or the price of repairs, stores, and provisions, he becomes, in the first place, himself personally bound, unless he, in express terms, confine the obligation to the owners. "But such a contract made by the owners themselves, or under circumstances which show that credit was given to them alone, gives the creditor no right of action against the master" (*Shee's Abbot*, 115). To render the owners liable,—when supplies are furnished, they must be reasonably proper for the occasion; and when repairs are undertaken, they must be necessary. The general rule on which the master should act is, to restrict himself to those obligations which a prudent owner would himself incur in the circumstances. "The creditor is required to prove the actual existence of the necessity of those things which give rise to his demand. The authority of the master is to provide *necessaries*; if, therefore, a person trust him for a thing not necessary, he trusts him for that which it is not within the scope of his authority to provide" (*Abbot*, 120). If the master expend money of his own for such purposes, he is entitled to demand repayment. In a home port the authority of the master to incur such obligations may be superseded by that of the owners or a shipshusband; but the master's presumed power wartants individuals in contracting with him, unless they are aware of his being so superseded. The master may hypothecate the ship, or give the creditor a right to a security over it, for the expense of repairs in a foreign but not in a home port. Ireland has, for this purpose, been held a foreign country in the case of an English ship. [BOTTOMRY AND RESPONDENTIA.] It has been found that the master has no lien on the ship, for expenditure which he may have himself undertaken for repairs, or for recourse in the case of his having had to make good obligations incurred on account of repairs (Hussey *v.* Christie, 9 *East.* 426). It is the duty of the master, like every other agent, to use his own endeavours for furthering the interest of his constituents in the matter committed to his charge; and the greater importance of the trust calls on him for a corresponding exercise of vigilance and skill as an agent. He is responsible for losses occasioned by his misconduct or blunder. [BARRATRY. INSURANCE. SHIPPING.] There are many statutory regulations to which he must attend, in the laws for the collection of the revenue, which will be found abridged under the various heads of CUSTOMS, SHIPPING, WAREHOUSING, and in the act for consolidating the laws relating to merchant-seamen (5 & 6 Wm. IV. c. 19), which will be found under the head of SEAMEN.—(*Holt on Shipping*, 215-258. *Abbot on Shipping, 6th edition by Shee*, 102-160.)

MASTER AND SERVANT. The more important of the legal principles connected with this head, and coming within the scope of the present work, refer to the relations, obligations, and responsibilities of the parties in their transactions with the public. These will be presented under the head of Principal and Agent; and it only remains to give here a brief view of the nature of the engagement and the manner in which it is incurred, and the more usual remedies which parties may adopt when they feel aggrieved. The contract need not be in writing, unless it be intended to last longer than a year. In the case of clerks, warehousemen, shopmen, and in general all classes of persons who are in the way of being employed as permanent members of an establishment, a hiring without condition is a hiring for a year, and to make it terminable at a shorter period, there must be some specialty in the agreement, to show that the parties intended it to be for a shorter time. "By the general understanding on the subject, and without an express agreement or understanding to the contrary, *domestic* or menial servants, though hired by the year, are subject to be dismissed or to depart at any time on a month's notice given by either, or a month's pay by the master" (*Burn's Justice*, Servants, ii.). This doctrine applies to England; in Scotland, the matter is regulated by local usage. A general hiring at so much per month, or so much per week, is a monthly or weekly hiring; but it is open to proof that the hiring was intended to be for a longer period, and that the expression was merely employed in rating the wages. In the case of such hiring by the year, or other consuetudinary period, if the servant continue in his employment after its expiry, the parties are held to have contracted with each other again for a like period.

Statutory Provisions.—There are several statutory provisions for regulating the intercourse between employers and employed, the more important of which only can be here briefly noticed.

The 4th Geo. IV. c. 34, applies to the case of farm-servants, artificers, calico-printers, handicraftsmen, miners, colliers, keelmen, pitmen, glassmen, potters, and other labourers. In the circumstances of any such person refusing—if hired by a signed written contract—to commence, or (whether there be writing or not) deserting his service, or committing any misconduct, the hirer or his steward may complain on oath to a justice, who, on investigation, may abate the workman's wages, or imprison him for a period not exceeding three months, or discharge him. To facilitate the recovery of the wages of such workmen in case of the non-residence of their employers, justices, on their complaint, may summon the steward or foreman, award the wages (provided they do not exceed £10), and on non-payment within 21 days, levy the sum by distress and sale.

Truck System.—The act for abolishing the truck system (1 & 2 Wm. IV. c. 37) applies to miners, quarriers, saltmakers, brickmakers, cutlers and other workers of metals, japanners, tanners, and hemp, woollen, cotton, and silk manufacturers. It renders void all contracts where the engagement is not to pay in the current coin, or where there is a stipulation as to how the wages are to be spent. It is illegal to remunerate the artificer with goods, and these cannot be set off against his claim for full wages. Any employer transgressing is liable to a penalty—viz. for the first offence, not less than £5 or more than £10; for the second, not less than £10 or more than £20; and for the third, not exceeding £100.

Arbitration.—Disputes between a master and workman may be referred by any writing under their hands to the final and summary determination of any justice of the peace or magistrate, within whose jurisdiction the party complained against resides. The disputes which may be so referred are, *1st*, Disputes as to the price of work, whether arising as to payment of wages, hours of work, injury done to the work, delay in finishing it, or bad materials; *2d*, Where workmen are employed at any new pattern which may require them to purchase any new implements, or alter their old ones, and the parties cannot agree as to compensation; *3d*, Disputes as to the dimensions and quality of goods, "or, in case of cotton manufacture, the yarn thereof, or the quantity and quality of the wool thereof;" *4th*, Disputes regarding the remuneration for pieces of goods of any extraordinary length; *5th*, Disputes in the cotton manufacture, as to the manufacture of cravats, shawls, pullicat, roomal and other handkerchiefs, and the number to be contained in a piece; and, *6th*, Disputes arising from the particular trade or manufacture, or relative contracts, which cannot be otherwise settled. 5 Geo. IV. c. 96.

[Factor. Principal and Agent. Shipping.] (*Acts as quoted. Burn's Justice. Smith's Mercantile L.* 352-356. *Burton's Manual of the Law of Scotland*, 475-479.)

MASTIC (Arab. *Arah.* Fr. *Mastic.* Ger. *Mastix.* It. *Mastice*), a resinous exudation from the *Pistacia lentiscus*, a shrubby tree found chiefly in the island of Scio, of which indeed it is the most celebrated production. When good, it occurs in pale yellow, brittle, transparent drops, of an astringent taste, and light agreeable odour, especially when heated. Such as inclines to black, green, or is dirty, should be avoided. "It forms the basis of several dyeing varnishes, is one of the ingredients used in fumigations, and is considered to be efficacious in promoting a healthy state of the mouth: for this latter purpose it is held in much esteem by the Turks, Greeks, and all the people of the Levant, who constantly chew it. The women of Scio, Smyrna, and Constantinople, have almost always a piece of it in their mouths."—(*Lib. of Ent. Knowledge: Veg. Substances*, vol. iii. p. 422.) Upwards of 300 cwts. are annually imported for consumption.

MAT, MATTING (Fr. *Nattes.* Ger. *Matten.* Rus. *Progoshki*), a texture formed of rushes or the bark of trees interwoven, and used for coarse floor-covering, for packages, and other purposes. Mats are imported from various countries, but chiefly from Russia, where a kind called *bast* mats are manufactured on a large scale from the inner bark of the lime-tree. The matting bags in which sugar is imported from Mauritius have of late years been also much in request; they are made of the leaves of a tree called in that island the *racoa*. Floor and table mats made from rattans and rushes are likewise occasionally brought from China.

MATE, the deputy of the master in a merchant ship. The first mate of every vessel exceeding 80 tons in burthen, and the first and second mate of every vessel exceeding 300 tons, when regularly entered as such, are exempt from impressment (4 Geo. IV. c. 25, § 7). [Seamen.]

MATÉ, YERBA, or PARAGUAY TEA, the leaves of an evergreen, shrubby plant (*Ilex Paraguayensis*), largely consumed in the manner of tea in many parts of South America, where they are the subject of an extensive commerce.

The plant grows wild in all the woods bordering the affluents of the Uraguay and Parana, as well as those of the Paraguay from the east, from lat. 24° 30′ northward. The leaves are first slightly scorched, by drawing the branch itself through fire; they are then roasted, broken down, and packed under strong pressure. The custom of using this herb was derived by the Spaniards from the Indians of Maracaya; and it is now general in Paraguay, and even in Chili, Peru, and Quito. A pinch of the leaves is put into a small cup of warm water, and the infusion is imbibed through a little tube pierced with small holes in the lower part, which only allow the passage of the water, and keep back the leaves. The same leaves serve for three infusions. Some drink it with sugar or lemon-juice, and it is taken at all times. [Paraguay.]

MAUND, an eastern weight, much used in India.

MAUNDY MONEY, a name given to certain small silver coins distributed by the Queen as alms on Maundy Thursday. [Coin.]

MAURITIUS, or ISLE OF FRANCE, a British colony in the Indian Sea, about 600 miles E. of Madagascar. Discovered by Portuguese, 1505. Possession taken by Dutch, 1598. Abandoned by Dutch and colonised by French, 1715. Became subject to Britain, 1810. Area, 676 sq. miles. Population (1839), 135,197, mostly negroes, but including about 9000 whites, chiefly of French extraction, and 12,000 Indians. The administration is vested in a governor and council.

The island is in general mountainous, the land rising from the coast towards the centre; and a considerable portion of the interior is composed of an extended table-land. The climate on the elevated plains is very moist, but on the whole the island is salubrious, and indeed is visited on this account by invalids from India. The chief disadvantage under which it labours is its great exposure to hurricanes. These occur mostly between December and May, a period corresponding nearly with the rainy season. Mauritius is not generally a fertile island, and it is dependent for provisions on India, the Cape, and other places; but in some parts the soil is exceedingly rich, and tropical commodities are produced in great abundance. The spices of Ceylon have been introduced, but not with much success; and since 1825, when the importation of the produce of the island into Britain was allowed on the same footing as the West India colonies, the planters have given nearly their exclusive attention to the sugar-cane, the cultivation of which has since been very greatly extended, though it is now supposed to have attained its maximum. In the year 1839, there were under crop 70,292 acres sugar-cane, 3145 maize, 6533 mandioc, 1833 potatoes, 388 coffee, 76 cloves, and 5 nutmegs; and there were exported of staples, 661,239 cwts. sugar, 60,338 gallons rum, and 212,639 gallons molasses.

Mauritius is favourably situated for trade; and the last published accounts, those for 1837, state the amount of imports at £1,034,242: of which, from Britain, £344,739, chiefly cotton manufactures, machinery, mill-work, and carriages, metals, dried provisions, and ale; from British India, £281,235, mostly rice and corn; from France, £122,651, comprehending wines, live-stock, spirits, silks, cabinet wares, &c.; from Pondicherry, £79,872, chiefly cotton piece goods, rice, soap, candles, and skins; the chief other imports were corn, provisions, and live-stock, from the Cape,

£70,790; live-stock, rice, &c. from Madagascar, £58,633; bags, skins, and French goods, from Bourbon, £35,890; besides articles of smaller amount from Australia, Java, &c., and of oil from the fisheries. The exports in the same year, consisting almost wholly of the island staples, amounted to £831,132; of which, to Britain, £637,870; Australia, £79,940; Cape, £44,767; Bourbon, £20,155; Madagascar, £15,716; British India, £13,965; Pondicherry, £7581; France, £6355; besides smaller amounts to Java and other places.

There are two ports; *Port Louis*, the capital, in lat. 20° 10′ S., long. 57° 29′ E., pop. 26,000, lies in the N.W. extremity, within a narrow inlet; and *Mahébourg*, on the S.E. coast: the harbours of both are good, and safe, except in the hurricane seasons. From 100,000 to 120,000 tons of shipping enter annually.

MEASURES, MONEY, DUTIES, &c.

Measures and Weights.—The Imperial measures and weights are employed in government transactions, but the old system of FRANCE is that in ordinary use. The common practical equations are, 15 French feet = 16 Brit. feet; 7 aunes = 9 Brit. yards; 1 arpent = 1 Brit. acre, 7 perches; 1 velt = 2 old English wine gallons, and 30 velts = 1 cask; the quintal of 100 lbs. French poids de marc = 108 lbs. avoirdupois, and 20 quintals = 1 French ton.

Money.—Accounts are kept in sterling; also in dollars of 100 cents or 10 colonial francs. The circulating medium is composed of notes for £2 and upwards, issued by the Mauritius Bank, established in 1832, and the Mauritius Commercial Bank, founded in 1838, and of a variety of coins. The dollar coined for the colony is of the same value as the Spanish dollar. Private bills are drawn in Europe at 90 d. s.; on India, 30 d. s.; on Bourbon, 15 d. s.; and commissariat bills on Britain are granted at 30 days' sight.

The Duty on British or colonial produce or manufactures imported in British ships is 6 per cent.; wheat, rice, and cattle, in British ships, free. Export duty on sugar, 1s. 2½d. per 100 lbs. when in British ships, and 2s. 2d. in foreign do. Entrepôt tax 1 per cent. on British; and 1½ per cent. on foreign goods.

The *Colonial Revenue* is about £180,000.

MEAD OR **METHLEGIN**, a liquor of ancient use in Britain, prepared by fermenting honey and water with a small quantity of spices and ground malt.

MEASURES are, in commerce, of two kinds: those which have reference to geometrical qualities, or the attributes which belong to extension; and those which have regard to the physical quality of gravity, or *weight*. But as all the physical properties of matter have an inseparable connexion with extension, the unit of the measures of length may be held as the elementary foundation of both: its square affords the unit of the measures of surface, and its cube the unit of the measures of capacity; while from this last may be derived the unit of the measures of weight,—a vessel of any stated capacity filled with water, or any other homogeneous fluid, always weighing the same in the same latitude.

Standards are those measures of public or acknowledged authority by which others are adjusted. The importance of accurate standards has always rendered their adjustment and preservation objects of the highest interest. Until of late years, however, none of those in use could be considered as strictly invariable, in consequence of the artificial bases on which they were established, and their tendency, as material substances, to gradual decay. But in several countries, the continued accuracy of the standards is now secured by their relation being fixed to some unchangeable object of nature. The objects preferred for this purpose have been, 1*st*, The length of a portion of the meridional circle; and, 2*d*, The length of a pendulum vibrating seconds of mean time. The first was adopted by the French in the year 1795, when the *metre*, which is the foundation of their present system of measures, was fixed at the ten-millionth part of the quadrant of the meridian, or 39·37079 inches; and the second was so far adopted by the British government on the introduction of the Imperial system, that the length of the standard yard, as compared with that of a pendulum vibrating seconds in the latitude of London (at 62° Fahrenheit, and in a vacuum at the level of the sea), is determined to be in the proportion of 36 inches to 39·1393 inches.*

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* Since the above was written, a Report (December 21, 1841) has appeared from Messrs Airy, Baily, Bethune, Herschel, and other scientific commissioners appointed by government to consider the steps to be taken for restoration of the metrical standards which were destroyed in the burning of the Houses of Parliament in 1834. From this report it appears that the use of the natural constants referred to in the text will not reproduce the values of the original standards without sensible error; and that in future it will be best to adopt a certain brass rod, and a certain brass weight, as the standards of extension and weight, respectively; which, with four parliamentary copies, the commissioners recommend should be fabricated from the best existing copies of the former standards, and placed securely in public repositories. They at the same time suggest, that the avoirdupois pound should be assumed as the unit of weight; and that the troy pound, the avoirdupois weights above 10 lbs. (as the stone, hundredweight, &c.), and the avoirdupois dram, should be abolished, and other weights in the ascending decimal scale of troy ounces and avoirdupois pounds, and in the descending decimal scale from the avoirdupois pound, should be substituted in their place. Other moderate changes of a systematic kind are recommended, particularly with the view of introducing the decimal scale—as a milyard, or mile of 1000 yards, a 10 gallon measure, and the more complete incorporation of the land-chain and its decimal multiples and divisions, with both our measures of length and of surface. The commissioners likewise direct public attention to the advantage of a decimal system of coinage. [MONEY.]

The Imperial measures were introduced by the act 5 Geo. IV. c. 74 (1824), and came into operation on January 1, 1826. This law, however, failed to produce a satisfactory uniformity in practice; and it was not until after the abolition of the heaped measures, and the introduction of the regulations of the act 5 & 6 Wm. IV. c. 63 (September 9, 1835), that they were generally adopted. In the Imperial system, the legal measures of extension and weight are continued as before; but a new measure of capacity is substituted for a variety of corn, wine, and beer measures, previously in use throughout the kingdom. The standards fixed were as follows:—The "Imperial standard yard," or brass "standard yard of 1760," bearing the proportion to the pendulum already mentioned. The "Imperial standard gallon," containing 10 lbs. avoirdupois, or 277·274 cubic inches of distilled water at 62° Fahrenheit, the barometer being at 30 inches. The old troy pound of 1758, containing 5760 grains; one cubic inch of distilled water at 62° Fahrenheit, the barometer being at 30 inches, weighing 252·458 of such grains; and 7000 of such grains are declared to be equivalent to the avoirdupois pound. The chief other provisions in the act are the following:—

Weights and measures must be duly stamped by the inspectors, after being compared with the copies; and those using them either not stamped, or found light or unjust, forfeit a sum not exceeding £5, with the weights or measures, and the contract is annulled. No weight above 56 lbs., or wooden or wicker measure used in the sale of lime, or glass or earthenware drinking-vessel, requires to be stamped; but any person, buying by any such measure represented as of any amount of imperial measure, may require the same to be tested by a stamped measure, and if the seller refuse to do so, or the measure is found deficient, he becomes liable to the above penalty. Weights made of pewter or lead cannot be stamped or used unless cased with brass, copper, or iron.

Weights of 1 lb. or more must have the number of pounds, and measures must have their contents, denominated in legible figures and letters.

Justices and magistrates, or any inspector authorized by them in writing, may, at all seasonable times, enter any shop, warehouse, or other place, within their jurisdiction, where goods are sold or weighed, and examine the weights, weighing-machines, and measures used there; and on any of these being found illegal or fraudulent, or their not being produced, or the investigation being obstructed, parties become liable in a penalty not exceeding £5.

Local and customary measures, including the Winchester bushel and Scotch ell, abolished, and not to be used under a penalty not exceeding 40s.; but any vessel not represented as containing any imperial, fixed, or customary measure, may be used in the sale of articles.

The use of the heaped measure is prohibited; and coal, slack, culm, or cannel, must be sold by weight. All articles sold by weight must be sold by avoirdupois weight, except gold, silver, platina, diamonds or other precious stones, which may be sold by troy weight; and drugs, which, when sold by retail, may be sold by apothecaries' weight. A stone-weight is to consist of fourteen pounds avoirdupois. The fiar prices in Scotland must be struck by the Imperial quarter.

Persons printing, or clerks of markets returning price-lists, journals, or papers, with a denomination of weights and measures greater or less than the Imperial, forfeit a sum not exceeding 10s. for every copy.

BRITISH MEASURES ACCORDING TO THE IMPERIAL STANDARDS, WITH THEIR EQUIVALENTS IN THE METRICAL SYSTEM OF FRANCE.

I. Measures of Length.

	Metres.
12 inches = 1 foot.	0·30479
3 feet = 1 yard.	0·91438
5½ yards = 1 pole, rod, or perch.	5·02911
40 poles = 1 furlong.	201·16436
8 furlongs or 1760 yards = 1 mile.	1609·31492

Special Measures of Length.—The hand = 4 inches; the pace = 5 feet; and the fathom = 6 feet. The geographical degree = 20 nautical leagues, or 69·121 miles. In land measure, the chain of 100 links = 66 feet.

II. Measures of Surface.

	Ares.
144 square inches = 1 sq. foot.	0·000929
9 square feet = 1 sq. yard.	0·008361
30¼ sq. yards, or 272¼ sq. feet = 1 sq. pole.	0·252919
40 square poles = 1 rood.	10·116775
4 roods, or 4840 square yards = 1 acre.	40·467102

The acre also contains 10 square chains; and 640 acres make 1 sq. mile, equal 258·989 hectares.

III. Measures of Capacity.

1. *General Measure of Solidity.*

	Cub. Metre.
1728 cubic inches = 1 cubic foot.	0·028315
27 cubic feet = 1 cubic yard.	0·764513

The ton measurement for shipping contains 8 barrel-bulk, or 40 cubic feet.

2. *Measures for Liquids and Corn.**

	Litres.
8·665 cubic inches = 1 gill.	0·142
4 gills = 1 pint.	0·568
2 pints = 1 quart.	1·136
4 quarts = 1 gallon.	4·543
2 gallons = 1 peck.	9·087
4 pecks = 1 bushel.	36·348
8 bushels = 1 quarter.	290·781
10 quarters = 1 last.	2907·815

The measures higher than the gallon are not used for liquids.

In *Beer Measure*, the barrel contains 4 firkins or 36 galls.; and the hogshead 1½ barrel or 54 galls.

In *Wine Measure*, besides the gallon and its subdivisions, various denominations are used, as the butt, pipe, and others specified below; but these are now to be considered rather as the names of casks than as expressing any definite number of gallons. The standard gauges recognised in trade are described in the article WINE.

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* In Ireland, grain is commonly sold by weight; a practice which is also followed in Liverpool, except in sales of malt and barley for malting purposes. In the latter place, wheat is sold by the 70 lbs.; oats by the 45 lbs.; and barley for grinding by the 60 lbs. weight. [Corn.]

IV. MEASURES OF WEIGHT.

1. *Avoirdupois or Commercial Weight.*

		Kilogrammes.
27·34 troy grains	= 1 dram.	0·0018
16 drams	= 1 ounce.	0·0283
16 ounces, or 7000 grains	= 1 pound.	0·4535
14 pounds	= 1 stone.	6·3496
28 pounds	= 1 quarter.	12·6992
4 quarters, or 112 pounds	= 1 hundredweight.	50·7969
20 hundredwgts. or 2240 pounds	= 1 ton.	1015·9388

Flour Weight.—1 peck = 14 pounds; 1 boll = 140 pounds; 1 sack = 280 pounds, or 2½ hundredweight; 1 barrel = 196 pounds.

2. *Troy, or Gold and Silver Weight.*

		Grammes.
24 grains	= 1 pennywgt.	1·555
20 pennyweights	= 1 ounce.	31·100
12 ounces, or 5760 grains	= 1 pound.	373·202

The troy pound is less than the avoirdupois in the proportion of 14 to 17 nearly; but the troy ounce is greater than the avoirdupois in the proportion of 79 to 72 nearly.

The mode of expressing the fineness of gold and silver is explained in the articles COIN and PLATE.

Diamond Weight.—Diamonds are weighed by carats, 151½ of which make one ounce troy; the carat is therefore equal to 3⅙ troy grains.

Pearl Weight.—The troy ounce contains 600 pearl grains, and hence one pearl grain is ⅘ths of a troy grain.

Apothecaries' Weight.—20 troy grains make 1 scruple, 3 scruples make 1 dram, and 8 drams make 1 troy ounce. This weight is used in medical prescriptions only.

Tables for the mutual Conversion of the British and French Measures.*

Metres.	Yards.	Hectares.	Acres.	Litres.	Imperial gallons.	Hectolitres.	Imperial quarters.	Grammes.	Troy grains.	Kilogrammes.	Lbs. avoird.
1	1·09363	1	2·47114	1	0·22010	1	0·34390	1	15·434	1	2·20486
2	2·18727	2	4·94229	2	0·44019	2	0·68780	2	30·868	2	4·40971
3	3·28090	3	7·41343	3	0·66029	3	1·03170	3	46·302	3	6·61457
4	4·37453	4	9·88457	4	0·88039	4	1·37560	4	61·736	4	8·81943
5	5·46817	5	12·35572	5	1·10048	5	1·71950	5	77·170	5	11·02429
6	6·56180	6	14·82686	6	1·32058	6	2·06341	6	92·604	6	13·22914
7	7·65543	7	17·29800	7	1·54068	7	2·40731	7	108·038	7	15·43400
8	8·74906	8	19·76914	8	1·76077	8	2·75121	8	123·472	8	17·63886
9	9·84270	9	22·24029	9	1·98087	9	3·09511	9	138·906	9	19·84371
Yards.	Metres.	Acres.	Hectares.	Imp. galls.	Litres.	Imp. qrs.	Hectolitres.	Troy grains.	Grammes.	Lbs. avoird.	Kilogrammes.
1	0·91438	1	0·40467	1	4·54346	1	2·90781	1	0·06479	1	0·45354
2	1·82877	2	0·80934	2	9·08692	2	5·81563	2	0·12958	2	0·90709
3	2·74315	3	1·21401	3	13·63038	3	8·72344	3	0·19438	3	1·36063
4	3·65753	4	1·61868	4	18·17384	4	11·63126	4	0·25917	4	1·81418
5	4·57192	5	2·02336	5	22·71730	5	14·53907	5	0·32396	5	2·26772
6	5·48630	6	2·42803	6	27·26076	6	17·44689	6	0·38875	6	2·72126
7	6·40068	7	2·83270	7	31·80422	7	20·35470	7	0·45354	7	3·17481
8	7·31507	8	3·23737	8	36·34768	8	23·26252	8	0·51834	8	3·62835
9	8·22945	9	3·64204	9	40·89114	9	26·17033	9	0·58313	9	4·08190

These tables are also equalization tables of prices, as well as of measures and weights, but in the inverse ratio of the latter. Thus, for example, 9 lbs. = 4·0819 kilogrammes; but when the price of a kilogramme = 9 francs or shillings, the price of a pound = 4·0819 francs or shillings: also 9 kilogrammes = 19·84371 lbs.; but when the price of 1 lb. = 9 francs or shillings, the price of 1 kilogramme = 19·84371 francs or shillings.—(*Vide* note on p. 472.)

PRINCIPAL OLD MEASURES SUPERSEDED BY THE IMPERIAL SYSTEM.

ENGLAND.

Measure of Length.—The ell = 45 inches.

Wine Measure.—The gallon equal 4 quarts, 8 pints, or 32 gills, and contained 231 cubic inches, or 3·785 French litres. Of these gallons the anker contained 10, the rundlet 18, the tierce 42, the hogshead 63, the puncheon 84, the pipe or butt 126, and the tun 252.

The Imperial gallon contains 277·274 cubic inches; therefore 1 wine gallon equal 0·833111 Imperial gallon; and 1 Imperial gallon equal 1·200320 wine gallon. The wine gallon is thus almost exactly ⅙th less than the Imperial; or 5 Imperial gallons equal 6 wine gallons. Hence, to convert wine gallons into Imperial gallons, deduct ⅙th from the former; and to convert prices per wine gallon into prices per Imperial gallon, add ⅕th or 20 per cent. to the former. Again, to convert Imperial gallons into wine gallons, add ⅕th to the former; and to convert prices per Imperial gallon into prices per wine gallon, deduct ⅙th from the former.

Ale and Beer Measure.—The gallon divided in the same manner as the wine gallon, and equal 282 cubic inches, or 4·6209 French litres. Of these gallons the firkin contained 9, the kilderkin 18, the barrel 36, the hogshead 54, the puncheon 72, the butt 108, and the tun 216.

One ale gallon equal 1·017045 Imperial gallon; or 1 Imperial gallon equal 0·983241 ale gallon; hence approximately 59 ale gallons equal 60 Imperial gallons.

Heaped Measure.—The bushel 19½ inches wide from the outside, 8 inches deep, and measuring 2217·6 cubic inches; but when heaped in the form of a cone above the brim, 2815½. Three heaped bushels made a sack, 12 sacks a chaldron, and 21 chaldrons a score. This measure was used for coals, culm, lime, fish, potatoes, and other commodities. Apples and pears were commonly sold by the Winchester bushel heaped.

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* The elementary equations used in the comparison of the French and British measures are as follow:—For extension, the metre = 39·37079; for weight, the kilogramme = 15434 troy grains. The former is stated on the authority of the second Report of the Parliamentary Commission on British Weights and Measures, and of the Annuaire of the French Board of Longitude; the latter according to the London Mint Report on attested Standards, sent to Lord Castlereagh, by D. R. Morier, Esq., Consul-general at Paris, 1820.

Winchester or English Standard Corn Measure.—The denominations of this measure were the same as the Imperial. The Winchester bushel contained 2150·42 cubic inches, or 35·237 French litres. The Imperial bushel contains 2218·192 cubic inches; hence 1 Winchester bushel or quarter equal 0·969447 Imp. bushel or quarter, and 1 Imp. bushel or quarter equal 1·031516 Winchester bushel or quarter; or approximately 33 Winchester bushels or quarters equal 32 Imperial.

SCOTLAND.

Measures of Length.—The standard Scottish ell of 36 Scots or 37·0598 Imperial inches. 6 ells made 1 fall; 40 falls 1 furlong; and 8 furlongs or 1920 ells made 1 mile, equal 1976·522 Imperial yards. Hence 10 Scots miles equal 11¼ Imperial or statute miles nearly. The chain of 100 links, used for land measure, was equal to 24 ells, 74·1196 Imperial feet, or 1·123024 Imperial chains.

Weights.—The standard Scottish Troyes or Dutch pound of 16 ounces, or 256 drops, equal 7608·95 troy grains, or about $\frac{1}{11}$th heavier than the avoird. pound. The Lanark stone contained 16 of these pounds, or 17·391885 lbs. avoird. The Scottish tron weight used for butter and cheese varied in different places.

The standard Scottish meal boll contained 8 stones Dutch, or 139·135 lbs. avoird.; but usually reckoned 140 lbs. in consequence of the Dutch or Lanark stone being estimated at 17½ lbs. avoird.

Liquid Measures.—The Scots gallon of 8 pints, 16 chopins, 32 mutchkins, or 128 gills, equal 3·00651, or rather more than 3 Imperial gallons. The Scots anker of 20 pints equal about 7½ Imp. galls.

Measures of Surface.—36 square ells equal 1 square fall, 40 square falls equal 1 rood, and 4 roods equal 1 acre, equal 1·261183 Imperial acre. To convert, therefore, Scots acres into Imperial, multiply by 1·261183; and to convert Imperial acres into Scots, multiply by 0·792906. Approximately, 23 Scots acres equal 29 Imperial acres; or more nearly, 134 Scots acres equal 169 Imperial acres. Hence Scots acres are convertible into Imperial acres by multiplying the number of the former by 169, and dividing the product by 134. On the other hand, Imperial acres are convertible into Scots acres by multiplying by 134, and dividing the product by 169.

Similarly to convert prices of land per Scotch measure into prices per Imperial, multiply the former by 0·792906; or approximately deduct ⅕th, or more nearly 4s. 1¾d. per £1 from the Scots price. Again, to convert Imperial prices into Scots, multiply the former by 1·261183; or approximately add ¼th, or more nearly 5s. 2¾d. per £1 to the Imperial price.

Corn Measures.—See the article BOLL.

IRELAND.

100 Irish gallons	=	78½ Imp. gallons.
11 Irish miles	=	14 Imp. miles.
121 Irish Plantation acres	=	196 Imp. acres.
24 Cunningham acres	=	31 Imp. acres nearly.

Reciprocal Conversion of Winchester and Imperial Measures.*

Winchester into Imperial.						Imperial into Winchester.					
Win. Qrs.	Imperial Quarters.	Win. Bush.	Imperial Quarters.	Win. Pecks.	Imperial Quarters.	Imp. Qrs.	Winchester Quarters.	Imp. Bush.	Winchester Quarters.	Imp. Pecks.	Winchester Quarters.
1	0·969447	1	0·121181	1	·03030	1	1·031516	1	0·128939	1	·03223
2	1·938894	2	0·242362	2	·06059	2	2·063031	2	0·257879	2	·06447
3	2·908341	3	0·363543	3	·09089	3	3·094547	3	0·386818	3	·09670
4	3·877788	4	0·484723	Gals.		4	4·126063	4	0·515758	Gal.	
5	4·847235	5	0·605904	1	·01515	5	5·157579	5	0·644697	1	·01612
6	5·816682	6	0·727085	Quarts.		6	6·189094	6	0·773637	Qts.	
7	6·786129	7	0·848266	1	·00379	7	7·220610	7	0·902576	1	·00403
8	7·755576	8	0·969447	2	·00757	8	8·252126	8	1·031516	2	·00806
9	8·725023	9	1·090628	3	·01136	9	9·283641	9	1·160455	3	·01209

As the Winchester and Imperial quarters are similarly divided, the first two columns in the right-hand Table will also serve for the conversion of Winchester bushels, pecks, gallons, and quarts respectively, into the same denominations in Imperial; while the inverse operation may be performed by means of the first two columns in the left-hand Table.

Reciprocal Conversion of Prices per Winchester and Imperial Measures.

Winchester into Imperial.								Imperial into Winchester.							
Win.	Imperial.		Win.	Imperial.		Win.	Imp.	Imp.	Winchester.		Imp.	Winchester.		Imp.	Win.
s.	s.	d.	s.	s.	d.	d.	d.	s.	s.	d.	s.	s.	d.	d.	d.
1	1	0⅜	20	20	7½	1	1	1	0	11⅝	20	19	4⅝	1	1
2	2	0¾	25	25	9½	2	2	2	1	11¼	25	24	2⅞	2	2
3	3	1⅛	30	30	11⅜	3	3	3	2	11	30	29	1	3	3
4	4	1½	35	36	1¼	4	4⅛	4	3	10½	35	33	11⅛	4	4
5	5	2	40	41	3⅛	5	5⅛	5	4	10⅛	40	38	9⅜	5	4⅞
6	6	2¼	50	51	7	6	6¼	6	5	9¾	50	48	5⅝	6	5⅞
7	7	2⅝	60	61	10⅝	7	7¼	7	6	9⅜	60	58	2	7	6¾
8	8	3	70	72	2½	8	8¼	8	7	9	70	67	10⅜	8	7¾
9	9	3⅜	80	82	6¼	9	9¼	9	8	8¾	80	77	6⅝	9	8¾
10	10	3¾	90	92	10	10	10¼	10	9	8⅜	90	87	3	10	9¾
15	15	5⅝	100	103	1¾	11	11⅜	15	14	6½	100	96	11⅜	11	10⅝

* These tables being expressed decimally, we have deemed it unnecessary to go higher than the nine digits, as the others can readily be obtained from them, merely by transposition of the decimal point, and addition. Thus, as 9 Winchester qrs. = 8·725023 Imperial qrs.; 90 Winchester qrs. = 87·25023 Imp. qrs., and adding these respective quantities, we have 99 Winchester qrs. = 95·975253 Imp. qrs. [DECIMAL FRACTIONS.]

Table for Converting Scots Land Measure into Imperial; and also for Converting Prices per Scots Measure into Prices per Imperial Measure.

Scots into Imperial Land Measure.						Conversion of Prices.					
Scots acre.	Imperial acre.	Scots fall.	Imperial acre.	Scots ell.	Imperial acre.	Scots. L.	Imperial. L. s. d.	Scots. s.	Imperial. s. d	Scots. d.	Imp. d.
¼	0·3152959	1	·00788	1	·00022	1	0 15 10¼	1	0 9½	½	0¼
½	0·6305917	2	·01576	2	·00044	2	1 11 8½	2	1 7	1	0¾
¾	0·9458876	3	·02365	3	·00066	3	2 7 6¾	3	2 4½	2	1½
1	1·2611834	4	·03153	4	·00088	4	3 3 5	4	3 2	3	2¼
2	2·5223669	5	·03941	5	·00109	5	3 19 3½	5	3 11½	4	3
3	3·7835503	6	·04729	6	·00131	6	4 15 1¾	6	4 9	5	3¾
4	5·0447338	7	·05518	7	·00153	7	5 11 0	7	5 6½	6	4¾
5	6·3059172	8	·06306	8	·00175	8	6 6 10¼	8	6 4	7	5½
6	7·5671007	9	·07094	9	·00197	9	7 2 8¾	9	7 1½	8	6¼
7	8·8282841	10	·07882	10	·00219	10	7 18 6¾	10	7 11	9	7
8	10·0894676	20	·15765	20	·00438	20	15 17 2	11	8 8½	10	7¾
9	11·3506510	30	·23647	30	·00657	30	23 15 9	15	11 10½	11	8½

The first two columns will answer likewise for converting Scots roods into Imperial roods, and Scots falls into Imperial poles or perches. The table for the conversion of prices shows the equivalents per Imperial acre, rood, or perch, of the given rates per Scottish acre, rood, or fall, respectively.

MEASURES AND DIVISIONS OF TIME. The principal measures of time are those furnished by nature in the rotation of the earth on its axis, the revolution of the moon round the earth, and the revolution of the earth round the sun,—periods respectively denoted by the terms Day, Month, and Year. For ordinary purposes, however, these are reckoned by approximate or conventional methods. The Civil Day is the *mean* solar day. The Lunar Month is, except in Eastern countries, superseded by the Kalendar Month. The Civil Year, or mean solar year, was adjusted by Julius Cæsar (B. C. 45), who, estimating the solar revolution at 365 days 6 hours, fixed that the year should consist of 365 days in three successive years, and 366 in the fourth, called leap year. This method, denominated *Old Style*, was adopted and continued by all Christian nations until A. D. 1582, when it was discovered that the Julian year was too long by about 11 minutes,—the true length of the solar year being 365 days, 5 hours, 49 minutes nearly. To rectify this error, which had then led to an advance of about 10 days, Pope Gregory XIII. ordained that the year 1582 should consist of 355 days only; and, to prevent a like irregularity in future, it was decreed that when a number denoting a complete century is not divisible by 4, as the 17th, 18th, and 19th, such years should be reckoned as common years,—an arrangement involving an excess of but one day in 5200 years. The Gregorian Kalendar, or *New Style*, was gradually adopted in all Christian countries, except those which acknowledge the Greek Church,—Russia and Greece. In Britain, it was adopted in 1752, when the difference of time being 11 days, it was enacted that the 3d of September of that year should be called the 14th. During the present century, the Old Style is to be reckoned 12 days later than the New Style. Thus, a Russian or Greek bill dated the 10th day of any month, must be reckoned from the 22d day of the same month in every place where the Gregorian Kalendar is used.

The REGNAL YEARS OF SOVEREIGNS are commonly used in dating public documents. In the following table the periods when the sovereigns began to reign are stated on the authority of Sir Harris Nicolas' "Chronology of History."

ENGLISH SOVEREIGNS FROM THE CONQUEST.

Names.	Began to Reign.	Names.	Began to Reign.	Names.	Began to Reign.
William I. (*the Conqueror*).....	1066 Dec. 25	Henry V.........	1413 Mar. 21	Jan. 30, 1649, to the restoration of Charles II.	
Wm. II. (*Rufus*)..	1087 Sept. 26	Henry VI.........	1422 Sept. 1		
Henry I. (*Beauclerc*)..........	1100 Aug. 5	Edward IV.......	1461 Mar. 4	Charles II. (restored*)..........	1660 May 29
		Edward V.........	1483 April 9		
		Richard III......	1483 June 26		
Stephen..........	1135 Dec. 26	Henry VII........	1485 Aug. 22	James II.........	1685 Feb. 6
Henry II..........	1154 Dec. 19	Henry VIII.......	1509 April 22	Wm. (III.) & Mary	1689 Feb. 13
Richard I.........	1189 Sept. 3	Edward VI.......	1547 Jan. 28	William III. alone	1694 Dec. 28
John..............	1199 May 27	Mary	1553 July 6	Anne.............	1702 Mar. 8
Henry III.........	1216 Oct. 28	Elizabeth.........	1558 Nov. 17	George I.........	1714 Aug. 1
Edward I..........	1272 Nov. 20	James I..........	1603 Mar. 24	George II.........	1727 June 11
Edward II.........	1307 July 8	Charles I.........	1625 Mar. 27	George III........	1760 Oct. 25
Edward III........	1327 Jan. 25	Commonwealth; from the execution of Charles I.,		George IV........	1820 Jan. 29
Richard II.	1377 June 22			William IV.......	1830 June 26
Henry IV.........	1399 Sept. 30			Victoria..........	1837 June 20

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* In some historical, and in all legal documents, the reign of Charles II. is reckoned from the death of his father, Charles I.

The Terms recognised in the different divisions of the United Kingdom for leases and money-payments are as follow:—

In *England* and *Ireland*: Lady Day, March 25; Midsummer, June 24; Michaelmas Day, September 29; and Christmas, December 25.

In *Scotland*: Candlemas, February 2; Whitsunday, May 15; Lammas, August 1; and Martinmas, November 11. When any of these falls on Sunday, the following Monday is considered to be the Term Day.

GENERAL KALENDAR FROM 1798 TO 1899.

Years.							Months.	Sundays.						
G	F	E	D	C	B	A		1	2	3	4	5	6	7
1798	1799	1800	1801	1802	1803			8	9	10	11	12	13	14
1804	1805	1806	1807		1808	1809		15	16	17	18	19	20	21
1810	1811		1812	1813	1814	1815		22	23	24	25	26	27	28
	1816	1817	1818	1819		1820		29	30	31				
1821	1822	1823		1824	1825	1826	January	A	B	C	D	E	F	G
1827		1828	1829	1830	1831		October							
1832	1833	1834	1835		1836	1837	May	B	C	D	E	F	G	A
1838	1839		1840	1841	1842	1843	August	C	D	E	F	G	A	B
	1844	1845	1846	1847		1848	February (*leap year*)							
1849	1850	1851		1852	1853	1854	February	D	E	F	G	A	B	C
1855		1856	1857	1858	1859		March							
1860	1861	1862	1863		1864	1865	November							
1866	1867		1868	1869	1870	1871	June	E	F	G	A	B	C	D
	1872	1873	1874	1875		1876	September	F	G	A	B	C	D	E
1877	1878	1879		1880	1881	1882	December							
1883		1884	1885	1886	1887		January (*leap year*)	G	A	B	C	D	E	F
1888	1889	1890	1891		1892	1893	April							
1894	1895		1896	1897	1898	1899	July							

Use.—To find the day of the week answering to May 4, 1840.—Above 1840 in the left-hand table, is found the *Dominical* or *Sunday Letter* D; and over D, contiguous to May, in the right-hand table, is the figure 3, the date of Sunday; the 4th, therefore, is Monday.

The converse of this operation, namely, to find the day of the month corresponding to the day of the week, is too evident to require illustration.

The months January and February, it will be observed, are to be referred to separately in leap years: such years may be known by a blank space always preceding them in the left-hand table.

The **Mohammedan Kalendar** dates from the flight of the prophet from Mecca to Medina, which, according to the civil calculation, occurred on July 16, A.D. 622, hence called the epoch of the *era of the Hegira*. The years of the Hegira are lunar years, and contain 12 lunar months, each commencing with the new moon; a practice which leads to great confusion, as each lunar month retrogrades through all the different seasons in nearly 32½ solar years. The months consist, like ours, of weeks, each day of which begins in the evening after sunset. As the lunar year consists of 354 days and 11-30ths of a day, a fraction which, in the course of 30 years, amounts to 11 days; the years of the Hegira are divided into cycles of 30 years; 19 of which are termed common years of 354 days each, and the 11 others intercalary, or *abounding years*, from their consisting of one day more: these are the 2d, 5th, 7th, 10th, 13th, 16th, 18th, 21st, 24th, 26th, and 29th. To ascertain whether any given year be intercalary or not, divide it by 30; and if any of the above numbers remain, the year is one of 355 days. In chronology, history, and public documents, the Turks use months which contain alternately 30 and 29 days, except the last month, which in intercalary years contains 30 days. The names of these months, with the length of each, are as follow:—Moharram, 30; Saphar, 29; Rabia I. 30; Rabia II. 29; Guimadhi I. 30; Guimadhi II. 29; Redgeb, 30; Schaban, 29; Ramadhan, 30; Schoual, 29; Dhu'l Kadah, 30; Dhu'l Hajjah, 29, and in intercalary years 30 days.

The day on which any year of the Hegira begins will be ascertained with tolerable accuracy by the following calculations:—Multiply the years elapsed by 970203; cut off six decimals; add 622·54, and the sum will be the year of the Christian era, and decimal of the day following in old style. Again, to reduce the Christian era to the Mohammedan, subtract 622 from the current year; multiply by 1·0307; cut off four decimals, and add ·46: the sum will be the year and decimal of the day, old style.

The following table, derived from the splendid French work "L'Art de Vérifier les Dates," shows the day of the Christian kalendar on which each Mohammedan year begins, from A. D. 1840 to 1900; from which, and the preceding list of months, the general correspondence of dates may be easily determined.

Anno Heg.	Anno Dom.		Anno Heg.	Anno Dom.		Anno Heg.	Anno Dom.	
1256*	1840	March 5	1277	1860	July 20	1298	1880	Dec. 4
1257	1841	Feb. 23	1278*	1861	July 9	1299	1881	Nov. 23
1258	1842	Feb. 12	1279	1862	June 29	1300*	1882	Nov. 12
1259*	1843	Feb. 1	1280	1863	June 18	1301	1883	Nov. 2
1260	1844	Jan. 22	1281*	1864	June 6	1302	1884	Oct. 21
1261	1845	Jan. 10	1282	1865	May 27	1303*	1885	Oct. 10
1262*	1845	Dec. 30	1283	1866	May 16	1304	1886	Sept. 30
1263	1846	Dec. 20	1284*	1867	May 5	1305	1887	Sept. 19
1264	1847	Dec. 9	1285	1868	April 24	1306*	1888	Sept. 7
1265*	1848	Nov. 27	1286*	1869	April 13	1307	1889	Aug. 28
1266	1849	Nov. 17	1287	1870	April 3	1308*	1890	Aug. 17
1267*	1850	Nov. 6	1288	1871	March 23	1309	1891	Aug. 7
1268	1851	Oct. 27	1289*	1872	March 11	1310	1892	July 26
1269	1852	Oct. 15	1290	1873	March 1	1311*	1893	July 15
1270*	1853	Oct. 4	1291	1874	Feb. 18	1312	1894	July 5
1271	1854	Sept. 24	1292*	1875	Feb. 7	1313	1895	June 24
1272	1855	Sept. 13	1293	1876	Jan. 28	1314*	1896	June 12
1273*	1856	Sept. 1	1294	1877	Jan. 16	1315	1897	June 2
1274	1857	Aug. 22	1295*	1878	Jan. 5	1316*	1898	May 22
1275	1858	Aug. 11	1296	1878	Dec. 26	1317	1899	May 12
1276*	1859	July 31	1297*	1879	Dec. 15	1318	1900	May 1

* Intercalary or *abounding years.*

In scientific computations, the Mohammedans use the solar year; but always according to the Julian kalendar or old style.

MECKLENBURG-SCHWERIN, a grand-duchy lying in N. Germany, between the Baltic and the Elbe, contiguous to Prussia, Hanover, and the territory of Lubec. Area, 4788 sq. miles. Population, 494,530. Government, a constitutional monarchy.

The country is generally level and fertile; agriculture is the chief employment of the people; and the manufactures are inconsiderable, though some pains are bestowed on those of linen and woollen. The exports consist almost wholly of farm-produce; and, according to Mr Meek's report (*Par. Paper*, 1842: No. 7), they amounted, on an average of the 3 years 1839-1841, to 205,699 quarters wheat; 72,674 qrs. rye; 56,243 qrs. barley; 29,665 qrs. oats; and 28,587 qrs. pease; besides 800,000 lbs. wool, mostly of fine quality, 1,550,000 lbs. bones, rapeseed cake, hides, and other articles. The imports embrace most kinds of manufactures and tropical produce, salt, wine, tallow, hemp, &c. The foreign trade is conducted partly through Hamburg by the Elbe, but chiefly at the ports of Rostock and Wismar on the Baltic, and the principal intercourse is with England. The trade of the grand-duchy, however, is much checked by the vicinity of Hamburg and Lubec, and the heavy duties imposed by the Prussian tariff.

Rostock, the chief port and largest town, lies in lat. 54° 5′ N., long. 12° 20′ E. on the river Warnow, about 9 miles from its mouth; pop. 18,200. In 1840, 702 vessels entered the port; and about 230 vessels, burthen 35,332 tons, belong to it.

Measures and Weights.—At Rostock the ell of 2 feet = 22¾ Brit. inches. The liquid measures are the same as in Lubec. The Rostock corn scheffel = 1·07 Brit. bushel. 100 Rostock lbs. = 112 lbs. avoird.; but the weights chiefly used are those of Lubec and Hamburg.

Money.—Accounts are stated in thalers or dollars of 48 schillings, each of 12 pfennings; also in marks of 16 schillings. The dollar = 3s. 4½d. The principal coin is the Constitution ⅔ piece, which is estimated at 32 schillings. Foreign exchanges are transacted chiefly through the medium of Hamburg, the usual rate being 130 dollars for 300 marks banco.

In the S. of Mecklenburg, Prussian monies and measures are common.

The Duties are levied according to a tariff published in Rostock in 1748, called the *Accise Rolle;* and at that port they average, including town duties, contributions, and bridge-money, about 3 per cent. Those on exports do not exceed this rate. The port charges at Rostock are very small, indeed lower than at any other place in the Baltic.

The Revenue is about £440,000, of which nearly £250,000 are produced by the domains. The debt is about £720,000.

MECKLENBURG-STRELITZ, a grand-duchy contiguous to the foregoing, with which indeed it is united by a compact called the Landes-Union, made in 1523. Area, 1092 sq. miles; pop. 89,528. Being situated at a distance from the ocean, and of small size, it possesses no commercial interest. [GERMANY.]

MEDIDA, a Brazilian measure equal 4⅔ Imp. pints nearly.

MEDLAR, the fruit of the *Mespilus Germanica*, a native of the south of Europe, but cultivated, though to a small extent, in this country. It resembles the smaller apples, and possesses considerable flavour, but does not attain the ripeness fit for use until some time after it has been taken from the tree. The Nottingham medlar is the finest, but the Dutch, a larger variety, is the kind most prized in England.

MEERSCHAUM, or earthy carbonate of magnesia, is a light substance, of a white or yellowish colour; soft when first dug, but hardens on exposure to the air. Principal localities, Samos, Negropont, Natolia, and Moravia. It is the material used in the manufacture of Turkish pipes, and is also employed as fuller's earth.

MERCANTILE SYSTEM, a theory of political economy, formerly in high repute, which was based on the principles that wealth consisted in gold and silver, and that those metals could be brought into a country that had no mines only by exporting to a greater amount than it imported. Its two great engines for enriching the country, therefore, were restraints upon importation, and encouragements to exportation. Importation was restrained by imposing prohibitions or high duties,—1*st*, Upon such foreign goods for home consumption as could be produced at home; and, 2*d*, Upon goods of almost all kinds from those particular countries with which the balance of trade was supposed to be disadvantageous. Exportation again was encouraged by—1*st*, Drawbacks; 2*d*, Bounties; 3*d*, Securing commercial privileges in some foreign state beyond what were granted to other countries; and, 4*th*, Monopolizing wholly or partially the trade of the colonies. The mercantile system was overthrown by Adam Smith, by whom it is discussed in the fourth book of the *Wealth of Nations*, to which we must refer for a full exposition of its fallacies. In the present work, further information will be found under the heads BALANCE OF TRADE, BOUNTY, COLONY, and COMMERCE.

MERCURY OR QUICKSILVER (Fr. *Mercure*. Ger. *Quecksilber*. Sp. *Azogue*), a brilliant silver-white metal, distinguished by being fluid at a natural temperature. Sp. gr. 13·57. It boils at 670°. At 40° below zero it becomes solid. When thrown on a table it collects into a globule, and, provided it is pure, runs without leaving a tail. Mercury is found native in small quantities; but for commercial purposes it is always extracted from the ore called *cinnabar*, a bisulphuret of the metal, found in Austria, Spain, Japan, China, and South America. The most productive mines are those of Almaden, near Cordova in Spain, which have been worked upwards of 2000 years; of Idria in Austria, and of Huancavelica in Peru. It occurs massive and crystallized, and of a red colour. Cinnabar is also prepared artificially by a combination of 8 parts mercury and 1 of sulphur; and the product is a red crystallized mass, which, when reduced to powder, is a beautiful scarlet, extensively employed as a pigment under the name of *vermilion*.

Mercury is principally employed for amalgamation with other metals, chiefly gold and silver, so as to extract them from their ores. It is used also in gilding, in silvering mirrors, and for various philosophical instruments. In medicine it is employed in several forms. The whitish insipid powder termed *calomel* is the protochloride of mercury; and the acrid nauseous white substance, known as *corrosive sublimate*, is the bichloride. The latter has of late been likewise extensively employed for the prevention of dry-rot.

The imports of mercury into this country, almost wholly from Spain, amount annually to about 2,000,000 lbs.; of which about one-eighth only is entered for home consumption. The remainder is re-exported chiefly to Mexico and Chili; but in considerable quantities also to Guatemala, the United States, and East Indies; while smaller shipments are made to Russia, Germany, Belgium, and other places.

Tares, in leather bags, 4 lbs. each; in iron bottles, weighing 3 qrs. 8 lbs., 15 lbs. per bottle.

MERINO, a fine kind of woollen fabric. [WOOLLEN MANUFACTURES.]

METRE, the rudimentary unit of the metrical system of France, fixed at the ten-millionth part of the quadrant of the meridian, is equal 39·37079 inches.

MEXICO, UNITED STATES OF, formerly the viceroyalty of New Spain, is now a federative republic, occupying the S. part of North America and N. part of Central America, betwixt 16° and 42° N. lat. It consists of 19 states, 5 territories, and a federal district, besides an extensive outlying tract. Area of the states, 833,600 sq. miles. Population of the whole, variously estimated at from 6,000,000 to 8,000,000, of which about one-half are Indian aborigines, 1,250,000 whites, and the remainder mixed races. Capital, Mexico, an inland city; pop. 140,000. The Congress of the union consists of a president, vice-president, and of two legislative bodies—the Senate and the House of Representatives.

About one-half of the surface of Mexico is situate within the tropics, while the rest belongs to the temperate zone; but of the former more than three-fifths have a mild atmosphere, as nearly the whole interior is composed of an immense table-land of the mean height of 7000 feet, continuous with the Andes of S. America, and running from 18° to 40° N. latitude. In the course of this tract, however, detached mountains occur which rise into the region of perpetual snow. The table-land gradually declines towards the temperate zone; but the descent towards the coasts, especially the E. coast, is by a graduated series of terraces, which produce an extraordinary diversity of vegetation, and at same time oppose great difficulties to the communication between the maritime districts and the interior, rendering it difficult to transport merchandise, except on muleback. In the equinoctial region there are only two seasons,—the wet, from June or July to September or October, and the dry, which lasts eight months: in this district the different climates rise as it were one above another from the shore, where the mean temperature is about 78° Fahr., to the central plains, where it is about 62°. The coast is humid and unhealthy for strangers, but the table-land is remarkable for its salubrity; most of the population of the country being concentrated upon the latter. The summit of the table-land is almost destitute of vegetation, owing to the absence of moisture; but muriate of soda and other saline substances exist in great abundance. The remaining districts are in general productive. Maize is the chief object of culture; besides which, the banana, manioc, the cereal grains, rice, and the potato, form the common food of the people. The Mexican wheat is of the finest quality, and would form a staple export, but for the difficulty of transporting it to the seacoast. The narrow insalubrious plain along the coast called the *tierra caliente*, or hot country, is remarkable for its luxuriant vegetation. The chief productions are the sugar-cane, cotton, cocoa, indigo, and tobacco. The southern part of the country, forming the isthmus, is celebrated for the variety and importance of its woods and medicinal plants,—including logwood, caoutchouc, vanilla, jalap, and storax, besides the tree which nourishes the cochineal insect. Vast herds of horses, mules, and horned cattle cover the plains of the northern states.

The mines of Mexico, however, constitute the chief source of its wealth, particularly those of silver, which indeed are by far the most valuable in the world. Gold is obtained, but only in small quantities. Copper, tin, iron, lead, and mercury, are also to be found. The gold is procured chiefly from river deposits by washing, particularly in the province of Sonora: the veins of this metal are most common in Oaxaca. The silver is mostly procured from veins, and the following is a list of the richest mines:—Guanaxuato, in state or province of that name; Catorce, in San Luis Potosi; Zacatecas, in province of that name; Real del Monte, near Mexico; Bolanos, in Xalisco; Guarisamey, in Durango; Sombrerete, in Zacatecas; Tasco, near Mexico; Batopilas, in Durango; Zuriapan, near Mexico; Tresnillo, in Zacatecas; Ramos, in San Luis de Potosi; Parral, in Durango.

According to Mr Ward (*Mexico in* 1827, vol. ii. p. 38), the annual average produce of the mines before the revolution in 1810 amounted to $24,000,000 (£4,800,000), and the average exports to $22,000,000 (£4,400,000); but after that event, the unsettled state of the country, the emigration of the Old Spaniards, and the withdrawing of the funds which kept the mines in operation, caused a great falling off; and in 1821, when the separation from the mother-country became inevitable, the coinage sunk to $8,067,560 (£1,613,512). In a few years afterwards, extraordinary efforts began to be made by British capitalists to restore the mines, and during the speculative excitement of 1825, many joint-stock companies were formed for this purpose. These associations began with spirit, and their shares speedily attained extravagant premiums; but it was soon found that almost every thing had to be reconstructed. The expenses attending the preliminary operations absorbed nearly the whole subscribed capital; while, owing to the defective mode of extracting the ore, and the mismanagement of many of the companies' agents, the produce was much less than was expected; and, in consequence, many of the undertakings were abandoned. Within a few years, no less than £3,000,000 of British capital were expended in enterprises connected with these mines; besides considerable investments by American and German companies. Notwithstanding these exertions, and the more improved processes which are understood to have been lately adopted, the silver produced at present is not estimated to exceed £2,300,000; nor the gold, £100,000; the former being thus only about one-half, and the latter scarcely above one-third of the amount produced before the revolution. [BULLION.] The English companies at present in operation are six in number, and the funds invested by each are estimated as follows:—Real del Monte, £500,000; United Mexican, £1,200,000; Anglo-Mexican, £1,000,000; Bolanos, £150,000; Halpuyahua, £180,000; Catorce, £60,000. The Bolanos is said to have been the most successful.

Manufactures in Mexico are generally in a rude state. The best were formerly those of gold and silver-plated articles, though these have now probably declined; coarse earthenware, woollens, and cottons, are made in some parts of the interior; also soda, soap, gunpowder, and leather.

The external commerce of Mexico, viewed comparatively with its population and natural resources, is inconsiderable. This is occasioned partly by the difficult communication between the interior and the coast, but mainly to the continued dissensions which have prevailed since the revolution. The exports, which may be estimated at from £3,000,000 to £3,500,000 a-year, consist chiefly of silver, which, with cochineal and gold, is mostly sent to Britain; there are, besides, sugar, copper (sent from Gaymas to China), indigo, coffee, cotton, hides (shipped from Upper California), tobacco, jalap, sarsaparilla, vanilla, Campeachy wood, and other drugs and dye-woods.

The principal import is quicksilver, of which about 6,000,000 lbs. are annually consumed in the mines; it is mostly brought from England, into which it is carried from Spain; cottons, woollens, and linens, are brought from Britain, also iron, hardware, arms, and earthenware; glass-ware and linen from Germany; paper from Italy and France; wine and brandy from Spain and France; olive-oil from Spain; hats from France; spices from England, East Indies, and China; silks from China, Britain, and France; cocoa from Venezuela and Ecuador. The declared value of British produce and manufactures sent annually to Mexico fluctuates generally between £400,000 and £700,000. An extensive trade is carried on with the United States, where most of the Mexican products find a ready market, and are paid for in the manufactures of those states or of Europe.

The Chief Ports for foreign trade are—in the Gulf of Mexico, Vera Cruz, Tampico, Campeachy, Matamoras, Sisal, and Tabasco; on the Pacific, San Blas, Mazatlan, and Acapulco; in the Gulf of California, Guaymas; and on the Sea of Upper California, Monterey. Of these, Vera Cruz, on the east coast, in lat. 19° 15′ N. long. 96° 20′ W., distant 90 leagues from Mexico, and formerly the sole port for European commerce, is still that to which the greatest amount of imports are brought; it has yet also the principal export-trade in all commodities except the precious metals, which are mostly sent from Tampico, the port nearest to the richest mining districts. Vera Cruz is defended by the celebrated castle of San Juan de Ulloa; it is very unhealthy; and its harbour is merely a bad anchorage, open to the north winds, which blow with dreadful impetuosity from October till April. Indeed, scarcely any of the ports on the east side are good,—an accumulation of sand being constantly driven into them by the trade-winds. The shipping frequenting the Mexican ports is of inconsiderable amount, owing to the staples of its trade being mostly articles containing great value in small bulk.

MEASURES, MONEY, FINANCES, &c.

The Measures and Weights are in general those of SPAIN; but the British yard and French aune are also used in the sale of European piece-goods.

Money.—The principal money of account in Mexico, and throughout Spanish America, is the piastre or dollar($), which is divided into 8 reals, or 100 cents. The real is also divided into 16 quartos or 34 maravedis; into 2 medios, 4 quartillos, or 8 ochavos; and, as in paying duties, into 12 granos.

The coins are,—In gold, doubloons or ounces (nominally of 16 dollars), also ½, ¼, and ⅛ doubloons: In silver, dollars, ½ dollars, ¼ dollars or pesetas, and reals of Mexican plate: In copper, quartillos, and clacos or ochavos. The gold coins throughout Spanish America are generally minted, as in Spain, at the rate of 8½ doubloons to the Castile mark, 21 carats fine; making the doubloon, when of full weight, worth £3, 4s. 8½d. The silver coins (except in the Colombian states) are also generally minted as in Spain at the rate of 8½ dollars, 17 half-dollars, 34 pesetas, or 68 reals to the Castilian mark. The standard of the dollar, which is usually termed the hard dollar (*peso duro* or *fuerte*), and sometimes the Spanish dollar, is 10¾ dineros fine in 12, and its value, when of full weight, is 4s. 2½d. The half-dollar is of proportional value. The pesetas and reals, however, are always inferior. The Spanish standard for these smaller coins is 9¾ dineros fine; but in several of the new republics this standard has been reduced: in BOLIVIA it is now only 8 dineros, or ⅔ds pure silver to ⅓d of alloy.

The dollar of account is reckoned both in the small base coins (which form the ordinary currency of the Spanish-American states) and in hard dollars; the latter occur chiefly in foreign trade. The usual exchange of the hard dollar is about 48d.; or, what is the same, $5 per £1, or $500 per £100. Remittances to Europe, however, are commonly made in specie.

Duties on imports are regulated by a tariff, non-enumerated articles in which pay 40 per cent.; quicksilver, tools, and seeds are free. Articles, the produce of Mexico, may be exported duty free, except the precious metals, which, in the shape of ore, ingots, or dust, are prohibited; gold, wrought or coined, pays 2 per cent., and silver 3½ per cent. The import duties, being generally high, they are evaded by many devices, which are connived at by the customhouse officers, who are notoriously corrupt.

Finances.—The public revenue was lately stated to average about $12,500,000 (£2,500,000), mostly derived from customs; but this is exceeded by the charges upon it, and the finances have been long in a disordered state. The domestic debt is considerable; and there is a foreign debt, originally composed of two English loans; one in 1824 of £3,200,000, 5 per cents, negotiated at 58 per cent.; the other, in 1825, of the same amount, of 6 per cents, raised at 89¾. By a subsequent arrangement, the unredeemed portion of these loans, with the arrears of interest due on them, were consolidated; the 5 per cents being taken at par, and the 6 per cents at 112½ per cent.; and the whole created into a 5 per cent. stock, amounting to £9,247,378, 8s. 6d,—one-half, £4,623,689, 4s. 3d., bearing interest from 1st October 1837; the other half, called "Deferred Bonds," to bear interest from 1st October 1847. Little has since been done towards payment of the dividends.

A Treaty between Mexico and Great Britain was executed on 26th December 1826, providing for the protection and security of their commerce, and placing the two states respectively towards each other on the footing of the most favoured nations.

MICA, a finely foliated mineral substance, sometimes used as a substitute for glass, particularly in certain kinds of stoves, to enclose the fire without concealing the flame. The large sheets of mica met with in this country are mostly imported from Siberia.

MILE, an itinerary measure, varying in different countries. [MEASURE.]

MILK (Fr. *Lait.* Ger. *Milch*), a secreted liquid intended for the nourishment of the young of mammiferous animals. The milk of the cow is that chiefly used by mankind. Butter is obtained from this fluid by agitation, and cheese by coagulation. The cow yields her milk most plentifully for some time after calving; then gradually yields less and less; and for six weeks or more previous to bringing forth her young, she usually becomes dry. The quantity varies greatly with the health, constitution, and treatment of the animals; but on a well-managed dairy-farm, where a proper breed of cows exists, the average yearly produce may be reckoned at from 700 to 800 gallons for each. Two gallons of milk or a little more will yield about 1 lb. of butter; and from 7 to 8 pints will yield 1 lb. of cheese (*Low's Agriculture*). Milk is only raised for direct sale in the neighbourhood of towns: in London and its environs, Mr Youatt estimates that 12,000 cows are kept at present for that purpose alone. At greater distances from towns, milk is generally converted into butter; and in still more remote places into cheese, or into butter which is salted. Mr M'Queen values the annual produce of the dairy in the U. K. as follows:—Milk, £12,000,000; butter, £13,500,000; cheese, £7,000,000; total, £32,500,000.—(*Statistics*, p. 48.)

MILLET, a kind of grain (*Holcus*) imported into this country from Germany and the south of Europe, chiefly for feeding small birds. There are a variety of different species. In most countries lying under the warmer latitudes of the temperate zone, the millets form a very essential article of domestic economy, being deprived of the husk and used whole as rice, or ground into meal and flour, and made into bread.

MILREA, the integer of account in BRAZIL and PORTUGAL.

MINIUM, or **RED LEAD**, is massicot finely ground and calcined. It is a red powder, but with a liability to turn black. It is used in painting, in the manufacture of glass, and in surgery.

MINOT, an old French measure, equal 1·073 Imp. bushel.

MISCAL, an Oriental weight, equal 74 troy grains nearly.

MOCHA STONE, is a semi-transparent calcedony, including various ramified forms produced by iron, or other mineral substances, but sometimes also by the presence of vegetable bodies, such as mosses. The finest are found in Gujerat, but received their name from having been brought from Mocha. An inferior sort is also found in Germany.

MODENA, a ducal state in N. Italy, between the Papal States and Parma. Area, 2080 sq. miles. Population in 1833, 403,500. The government is the most absolute in Italy.

About one-half of the territory is covered by the chain of the Apennines and its offsets; one-third more forms part of the plain of Lombardy; and a small but rich strip extends along the shores of the Mediterranean. Principal towns, Modena and Reggio. Exports, horned cattle, swine, fruit, silk, corn, brandy, wine, vinegar, and the marble of Carrara, both wrought and unwrought, which employs 1200 workmen, and yields annually about £30,000. A great fair takes place at Reggio, in March.

The braccio of Modena = 24·31 Imp. inches; the braccia of Reggio = 20·85 Imp. inches. The biolca, land measure, of 72 tavole = 0·7009 Imp. acre. The stajo of corn = 1·94 Imp. bushel. The quintal of 100 Modena lbs. = 70·45 lbs. avoird.; and 100 Reggio lbs. = 72·74 lbs. avoird.

The general money of account is the lira Italiana, divided into 100 centimes, and equal in value to the French franc, or 9½d. The old Modena lira of 20 soldi or 240 denari = 3¾d.; and the lira of Reggio = 2½d.

MOGIO, an Italian measure of capacity, varying in different places.

MOHAIR, the hair of the Angora goat; it is made into camlets, &c.

MOHUR, the principal gold coin of INDIA.

MOIDORE, OR **LISBONNINE**, an old Portuguese gold coin, value 26s. 11¼d.

MOLASSES. [SUGAR.]

MONEY, any commodity employed as a standard by which to measure the value of others, as the equivalent given for them, and as a medium of exchange. Various articles have, in different states of civilisation, been used to perform the functions of money,—as cattle, salt, furs, tobacco, silk, cowry shells, and some others; but in almost all parts of the globe these are now superseded by silver and gold, owing to their greater portability, divisibility, and indestructibility, and to their being less liable than almost any other commodities to fluctuations of value. In early ages, the denominations of money were identical with those of weight, and the metals were circulated in ingots or small masses. But as civilisation advanced, and transactions increased, the constant trouble of weighing them, and, in most instances, of also assaying them, produced a degree of inconvenience, that led to the introduction of small pieces, impressed with a national stamp, which rendered both operations unnecessary. These, under the name of COINS, became thus in general use in transactions between individuals belonging to the same political community; though silver and gold, in their former state of ingots or bars, have continued to be employed, in a greater or lesser degree, in international exchanges.

Some states, in their coinage, have made use of one metal only as standard money, or *legal tender* to any amount; others, of both gold and silver, at a certain fixed relative value. In the United Kingdom the standard is gold, which is coined at the rate of 1869 sovereigns from 40 troy pounds of standard metal, or, what is the same, at £3, 17s. 10½d. per ounce. In France, Austria, Russia, and most other continental states, there are two standards; but owing to the relative value of gold to silver being fixed by their mint regulations at a rate higher than their relative value in the market, the latter metal alone is practically in use as legal tender, and an agio on the mint rate has to be paid in order to procure gold. In the United States, where there are also two standards, this rule was reversed in 1834, when, owing to a reduction in the weight of their gold coin [EAGLE], that metal became the general medium for large payments instead of silver.

Of the precious metals, gold, from its superior portability, has been always preferred for large payments and foreign remittances. But, in the progress of society, it became gradually apparent that the advantages of metallic money were chiefly confined to its functions as a standard and equivalent of value; as a medium of exchange, its weight, the trouble of counting large sums, and the risk of losing while removing what has so great an intrinsic value, rendered it unfit for the extended operations of modern commerce. These inconveniences led, in the fourteenth century, to the introduction of bills of exchange; and, at a later period, to that modification of these instruments which has obtained the name of paper-money. The substitution of a cheap for an expensive medium of circulation, by this "coining of credit," is often pointed out as the chief advantage of paper-money; but this is a narrow view of its conveniences. Metallic money would not, even supposing its quantity unlimited, suffice for carrying on so much perhaps as a hundredth part of the transactions that take place in Britain alone; while, in the greater part of those between distant places, the inconvenience and cost of transporting it from place to place would be so great, that direct exchange or barter would be found the preferable mode of proceeding.

In the continental states, paper-money is generally supplied by their respective governments, either directly, in the shape of treasury notes, or indirectly, through the medium of banks under their control. In the United Kingdom, it is issued, partly by chartered banks, invested with peculiar privileges, and partly by joint-stock and private banks, the amount of the whole being commonly about £38,000,000; which, with £25,000,000, the estimated amount in coin, makes the circulation in all £63,000,000. But, in viewing this as the amount of our circulation, regard must be had to the extent to which the use of money is economised, by the employment of bank-cheques and letters of credit, by the speedy, in many cases the immediate return of notes, produced by the system of allowing interest on bank-deposits, and by many other operations, not forgetting that of the Clearing-house, where payments ranging from £1,500,000 to £6,250,000, are effected daily by the private bankers of London with only about £200,000 of bank-notes.[*] In other countries, the circulation is, from the absence of such facilities, comparatively much greater. In France alone, the amount of coin in use is not under £100,000,000; that of bank-notes, however, being only £12,000,000.—(*Report on Banks of Issue*, 1840, *Q.* 7570.)

The rate at which money exchanges for other articles is determined by its quantity. "If," says Mr Mill, "we suppose that all the goods of the country are on one side, all the money on the other, and that they are exchanged at once against one another, it is obvious that one-tenth or one-hundredth, or any other part of the goods, will exchange against one-tenth, or any part of the whole of the money; and that this tenth will be a great quantity or small exactly in proportion as the whole quantity of the money in the country is great or small" (*Polit. Econ.* c. 3, § 7). The quantity of money, however, is to be estimated, not merely by its proportion to the amount of trade or of payments, but also by the relative rapidity of its circulation, and after allowing for the extent to which its use is economised. Supposing the amount of trade and mode of circulation to remain stationary, if the quantity of money be increased, its value will fall, and the price of other commodities will proportionally rise, as the latter will then exchange against a greater amount of money: if, on the other hand, the quantity of money be reduced, its value will be raised, and prices in a corresponding degree diminished, as commodities will then have to be exchanged for a less amount of money. The converse of these changes will take place if the variations occur in the amount of trade and mode of circulation, and the quantity of money remain stationary. "In whatever degree, therefore, the quantity of money is increased or diminished, other things remaining the same, in that same proportion the value of the whole and of every part is reciprocally diminished or increased" (*Ibid.*). Gold and silver, however, as products of industry, possess an intrinsic value, like all other commodities, equivalent to the cost of producing them; and hence, in the case of metallic money, if its value in any country be reduced below the level of other countries, it will be used or exported as bullion; while, on the other hand, if its value be increased above that level, it will become an object to import bullion to convert it into coin. The value of metallic money in any country can thus be for only a short time above or below its level in other countries, or its cost of production. A mixed currency, composed of coin, and paper convertible into coin, is obviously regulated by the same laws. But such is not the case with an inconvertible paper-money; for, though under equal limitations as to quantity, it may, *when constituted legal tender*, be preserved of the same exchangeable value as metallic money; yet, wanting intrinsic value, it will not circulate in foreign countries; and hence, when issued in excess, it will become proportionally depreciated; and this depreciation (which will be measured by the rate at which the paper exchanges against bullion) may, by continued additions, go on increasing, until its value as a medium of exchange is entirely dissipated. [ASSIGNATS. BANK.]

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[*] In the year 1839, the amount of payments made through the Clearing-house was £954,401,600, which were effected with only £66,275,600 of bank-notes: thus giving £3,068,815 as the average of the daily payments for the 311 business days; £213,105 as the average amount of bank-notes daily used; and leaving £2,855,710 for the daily cancelments of the clearing transfers. These sums, enormous though they be, are considered to fall far short of what they were formerly, when the Bank of England less interfered with private business, when London joint-stock banks (which are not admitted to the clearing-house) were not in existence, and when war-expenditure and funding operations gave constant activity and extent to the money business. Several days' clearances then ranged from £12,000,000 to £15,000,000.—(*Tate's System of the London Bankers' Clearances*, p. 27.)

But although fluctuations in the value of a metallic or mixed currency, owing to variations in quantity, are subject to correction from the influence of the currencies of other countries, the case is different when any diminution is made on the weight of the coin. In this case, though preserving the same name, it will become permanently degraded; and if reduced one-half, will as certainly be lowered in real value to the same extent, as a quarter of wheat would be by being reduced to four bushels. In ancient times, owing partly to erroneous conceptions of the nature of money, but chiefly to the injustice of sovereigns, who were thereby enabled to fulfil, in appearance, their engagements with a smaller quantity of gold and silver than would otherwise have been requisite, the degradation of the coin was a common act of public policy; and the English pound was, in this way, reduced to 1-3d, the Scottish to 1-36th, and the French livre to 1-66th of their original values. Such an expedient is now almost unknown in civilized communities; but a similar effect may be produced by fraudulent paring or by abrasion. When a seignorage is exacted higher than the expense of coinage, the intrinsic value of the coin will of course be less than its nominal value, but such coins can be used only, like British silver or copper, as a subordinate species of money for small payments, and under certain limitations as to quantity.

A currency may be accounted in its most perfect state when it consists of paper of a value precisely equal with the gold or silver which it professes to represent; as no other instrument can fulfil in a higher degree the great requisites of a circulating medium,—convenience, cheapness, security, and steadiness of value. But considerable difference of opinion prevails in reference to the method best adapted for the practical attainment of these objects. Of late there has arisen a party, who, on the allegation that undue expansions and contractions of the currency have been the secret spring of all those alternations of commercial excitement and depression which have taken place in modern times,—advocate the separation of the functions of issue from those of banking, and the confining of the former to one state establishment, which should circulate a fixed amount of government paper-money (below the point to which a purely metallic currency would ever be reduced), and leave all fluctuations to take place in the precious metals alone, or in the notes of a bullion deposit bank; or which should in some other way regulate the amount of the circulating medium, so that there should be no greater fluctuation than if it wholly consisted of the precious metals. Such plans, however, are opposed both by those who uphold the present system, and by those who, advocating the further extension of joint-stock banking, contend that the issues of paper are best regulated by free competition. By the latter it is urged that experience has shown that no single body can be safely intrusted with the privilege of issuing paper: That if there was but one such body, there would be sometimes too much money and sometimes too little for the wants of trade in different places: And that, after declaring a certain coin to be the sole standard of value and legal tender, and providing for the public registration of all the partners of a bank, and their unlimited responsibility for all its obligations, the lengthened experience of Scotland has shown that were government to confine its further interference to enforcing the fulfilment of contracts, it might safely be left to the parties themselves to judge of the degree of credit they should give to each other's engagements, and to adopt that mode of circulating such engagements which might appear to them to combine the greatest security with the greatest cheapness and convenience.

Upon these and the other plans advocated by writers on the currency, however, it is unnecessary to enlarge in this place. They form, as is well known, the subject of two reports in 1840 and 1841 by Committees of the House of Commons; and such persons as feel an interest in the question will not satisfy themselves with any second-hand arguments, but will of course refer to those reports, or to works where the subject is treated in a manner suited to its importance.

In the preceding observations we have assumed gold and silver to be invariable as standards; but in the article BULLION we have explained that in the course of ages these metals have themselves undergone great changes. In fact, no commodity can be depended on as a permanent measure of value. The facilities of its production will not always preserve the exact level of the average of other commodities, and move on in complete uniformity with the general progress of improvement in the industrial arts. No kind of money at present in use, therefore, can be free from the great variations of value to which the precious metals themselves are liable. Such a currency, however, has been imagined. "It has been proposed," says Mr Poulett Scrope, in his ingenious Treatise on Political Economy, "to correct the legal standard of value (or at least to afford to individuals the means of ascertaining its errors) by the periodical publication of an authentic price-current, containing a list of a large number of articles in general use, arranged in quantities corresponding to their relative consumption, so as to give the rise or fall, from time to time, of the mean of prices; which will indicate, with all the exactness desirable for commercial purposes, the variations in the value of money, and enable individuals, if they shall think fit, to regulate their pecuniary engagements by reference to this *Tabular Standard*" (p. 407). This proposition, however, is of too speculative a nature for consideration in the present work.

MONIES OF ACCOUNT are those denominations and divisions of money in which accounts are kept: in some countries these are not coins, but merely fixed proportions to coins, as was the case with the British pound sterling before the coining of the sovereign. In the Report by the Commissioners on the Standards of Weight and Measure, of 21st December 1841, the attention of the government is invited to the advantage and facility of establishing a decimal system of monies instead of that presently in use in this country. The facility consists in the ease of interposing between the sovereign (or pound) and the shilling, a new coin equivalent to two shillings (to be called by a distinctive name); of considering the farthing (which now passes as the 1-960th part of the pound) as the 1-1000th part of that unit; of establishing a coin of value equal to 1-100th part of the pound; and of circulating, besides these decimal coins, others bearing a simple relation to them, including the present shilling and sixpence.

MONOPOLY, a privilege granted by license, conferring on an individual or company the sole right of purchasing and disposing of, making or using, a certain specified article; the term is likewise sometimes used to denote the engrossing of commodities with the view of selling them at a high price. Monopolies were formerly granted by the sovereign, and they prevailed to a great extent in England in Queen Elizabeth's time; but, having become an intolerable grievance, they were abolished in the succeeding reign (21 Jac. I. c. 3), with the exception of patents for inventions or improvements for a limited number of years; and a charter of monopoly cannot now be granted without an act of parliament. The same law has been held to apply to Scotland.—(*Bell's Com.* vol. i. p. 108.)

MONSOONS, important modifications of the trade-winds which occur in the Indian Ocean, the nature of which is not yet fully understood.

In the Arabian and Indian Seas, on the north side of the equator, the monsoon blows north-east from November to March, and south-west from April to October; the former producing in India dry and agreeable weather, the latter rain and tempest. The change takes place gradually. In the Chinese and Sooloo Seas, however, the wind is generally N.N.W. from November to March, and S.S.E. from April to October. [INDIA. TRADE-WIND.]

MONT DE PIÉTÉ, a benevolent association for lending money on pledges at a moderate interest; and differing from ordinary pawnbroking establishments in being founded rather for the benefit of the borrower than that of the lender. Such institutions are said to have existed in Rome in the reigns of Augustus and Tiberius. They were revived in modern Italy in the 15th century, where they received every encouragement from the popes; and they exist at present in all the large towns in that country, the principal being the "Sagro Monte de Pieta di Roma," founded in 1539, and which in 1839 advanced no less than £211,554 on 306,161 pawns, the average amount of each being 14s. 2½d. The establishment likewise acts as a petty bank in receiving deposits. Monts de Piété are also instituted in many other parts of the Continent, particularly France. The "Mont de Piété de Paris" charges interest at 9 per cent., and one-half per cent. to the valuators at the time of releasing: the amount advanced by it in 1840 was £743,040 on 1,220,692 pawns, besides £230,553 on renewed articles. The loan is made for a fixed term, at the expiration of which, if the principal and interest are not repaid, the pledges are sold, and the surplus, after paying the debt, is restored to the owner: in most instances, however, the term may be renewed on payment of the interest. The profits are in some cases added to the capital, in others appropriated to charitable purposes. Such institutions are common in several parts of Ireland, but they are almost unknown in Britain, where their place is supplied by pawnbrokers. [BANKS FOR SAVINGS. LOAN SOCIETIES. PAWNBROKER.]

MONTEVIDEO. [URUGUAY, REPUBLIC OF.]

MORGEN, a German land measure varying in different places.

MOROCCO, the most important of the Barbary States, is bounded W. by the Atlantic; N. by the Mediterranean; E. by Algiers; and S. by the Sahara or Great Desert. Area, 274,000 sq. miles. Population, 8,500,000, mostly Arab Moors and Berbers. The chief cities are, Morocco the capital, Fez, and Mequinez, all inland. The government is a barbarous despotism.

The loftiest part of the chain of the Atlas runs parallel to the coasts, changing its direction with them from the Atlantic to the Mediterranean, and leaving an intermediate plain, the greater part of which is finely watered, and unsurpassed in natural fertility. But though the inhabitants have advanced greatly beyond the rude and roaming habits for which they were anciently distinguished, they pay little attention to the improvement of the land, which indeed might be made one vast corn-field. Beyond the Atlas, however, there is a more arid region, named Tafilet, unfit for grain, but yielding fine dates, and rearing a breed of goats, whose skins afford the fine morocco leather. The climate is not so hot as might be expected from the latitude, and wheat and barley are extensively raised; sheep are numerous, and produce fine wool, which is manufactured into a coarse fabric, forming the chief dress of the inhabitants. An active inland trade is carried on with Soudan, Egypt, and Arabia by caravans, and with other countries by sea.

The maritime commerce has increased considerably of late years. The imports consist chiefly of cotton, woollen, and silk manufactures and yarn, with raw silk, sugar, spices, dye-stuffs, metals, cutlery, tea, and earthenware; the exports of fruit, wool, olive-oil, wax, hides, corn, live-stock, gum, bark, and leeches. In 1839, the regular importations by sea amounted to £580,880, including £135,400 in specie; and the exportations to £480,360, including £94,400 in specie. But there is besides an extensive contraband trade, which it is estimated will swell these values one-fourth. Upwards of three-fourths of the trade is with the British: in 1839, the imports from England amounted to £460,960, and the exports to £356,560. A considerable part of our commerce is carried on through Gibraltar and Malta. Almost the only other states which participate in the maritime trade of Morocco, are France, the United States, Spain, and Portugal.

The maritime intercourse is conducted on the Atlantic side at Mogadore, the port of the capital, Saffee, Mazagan, Rabat the port of Fez, and Laraiche; and on the Mediterranean side at Tangier and Tetuan. In 1839, the entries inwards from foreign countries at all ports amounted to 372 ships, 20,003 tons; whereof British, 253 ships, 13,664 tons.

At Mogadore, the canna, cloth measure, = 21 Imp. inches. The rottolo or commercial pound = 8330 troy grains, and the quintal of 100 commercial lbs. = 119 lbs. avoird.: the market pound for provisions, and by which also iron and bees' wax are sold, is 50 per cent. heavier. The measures of capacity, though nominally those of Spain, are variable and uncertain.

The money of account is the mitkul of 10 ounces, 40 blankeels, or 960 flues. As 54 blankeels are reckoned equal to the Spanish hard dollar, the mitkul is worth 3s. 1d. The currency is composed chiefly of dollars, doubloons, and madrids: the madrid, which is a gold coin minted at Madrid for the Emperor of Morocco, is valued at 10 dollars.

MORPHIA, a vegetable alkaloid, procured by a chemical process from opium, and is the narcotic principle of that substance. When obtained from its alcoholic solution it is in small, brilliant, and colourless crystals, of a very bitter taste. The quantity obtained averages about 1 oz. from the lb. of opium; but it is very variable; the Turkey opium produces the most, and the East Indian and Egyptian the least. [OPIUM.]

MOSAIC GOLD, a bisulphuret of tin, formed by heating the peroxide with its weight in sulphur. It is produced in small, soft, shining flakes, of a golden yellow colour. It is chiefly imported from Germany, and under the name of *bronze powder* is much used for ornamental work, particularly paper-hangings.

MOTHER-OF-PEARL, the shell of the pearl-oyster. It is composed of alternate layers of coagulated albumen and carbonate of lime. On the inside it is exquisitely polished, and of the whiteness of the pearl; and on the outside the lustre is the same after the external laminæ have been taken off. It is imported into Europe from India and China, and is extensively used for inlaid works, toys, and snuff-boxes.

MOUSSELINE DE LA LAINE (in *Fr.* muslin of wool), a fine, thin, woollen fabric, manufactured in France, and much used for the dress of ladies. An inferior fabric, bearing the same name, and of similar appearance, though composed of wool mixed with cotton, is now also extensively made in Britain.

MOZAMBIQUE, a territory claimed by the Portuguese, on the E. coast of Africa, extending nominally from the Bay of Delagoa to Cape Delgado, and divided into seven captaincies; but their real possessions in this country are now few and insecure, and confined chiefly to the town of Mozambique, and the settlements of Quillimane, Senna, Tette, and Manica, on the Zambezi river. Melinda, once a flourishing settlement on the adjoining coast of Zanguebar, is deserted.

Mozambique, the capital, and commercial emporium of the Portuguese possessions on the E. coast of Africa, is situated on a small island closely adjoining the continent, in lat. 15° 3′ S., long. 40° 43′ E.; pop. nearly 10,000, of whom only a few hundreds are Europeans. It possesses a good roadstead and commodious pier; but in other respects it is situated unfavourably, being about 300 miles distant from the mouth of the Zambezi, the channel of intercourse with the interior. It is also unhealthy. The chief articles to be obtained at these settlements are gold, ivory, ambergris, Columbo root, tortoise-shell, and cowries. The export of slaves to Brazil was formerly considerable, and is believed to be still carried on to some extent. Provisions and refreshments are dear.

Of late much of the trade has been removed to Quillimane, at the mouth of the Zambezi, in lat. 17° 58′ S., long. 36° 59′ E.; pop. 3000. Weights.—The bahar weight is 20 frazils = 240 lbs. avoird. The currency is chiefly Spanish dollars and Portuguese coins.

MUDDE, a Dutch and Belgian measure = 2¾ Imp. bushels, or 1 hectolitre.

MULE, a quadruped springing from the union of the male ass with the mare, or of the horse with the female ass,—the former being the best. The mule is commonly found to be vicious, stubborn, and obstinate, to a proverb; but it is hardy, and valuable for its sureness of foot. It is also useful on account of the great load which it can carry. Hence its common use in some parts of Spain, in Mexico, South America, and in other mountainous countries without good roads. The Persian mules, according to Mr Fraser, are of prodigious strength, usually carrying loads of about 3 cwt., with which they travel day after day along the execrable paths and over the rough *cothuls* of the country (still preserving their condition), at the rate of from 25 to 50 miles a-day, according to the distance of the resting-places. The mule is longer-lived than either the horse or the ass; but it is seldom used in this country.

MULLET, a fish (*Mugil*), greatly prized by the epicures of ancient Rome, and the roe of which is at present largely made into BOTARGA, on the shores of the Mediterranean. The mullet is gregarious in its habits, about 12 or 14 inches in length, and of a peculiar form and brilliant appearance. One species, the red mullet, is taken on the S. coast of England, particularly in May and June. It is caught by the mackerel-nets, and in larger quantities by the trawl-net.

MUM, a fermented liquor, brewed principally from the malt of wheat.

MUNJEET, an inferior kind of madder-root imported from Calcutta. The roots are long and slender, with a smell somewhat resembling liquorice-root; when broken they appear of a fine red colour, having a yellowish pith inside. Nearly 30,000 bales are on the average imported annually, each weighing 20 lbs.

MURIATIC ACID, OR SPIRIT OF SALT, an aqueous solution of muriatic acid gas, now called hydrochloric acid gas. It is commonly procured by distilling a mixture of diluted sulphuric acid and common salt, equal weights being taken of salt, acid, and water. This acid is generally of a yellow hue, a very pungent smell, intensely sour taste, and emits fumes when exposed to air. Sp. gr. 1·170. The yellow hue is produced, according to Dr Thomson, from a trace of bromine; besides which, the acid of commerce is almost always contaminated with iron and sulphuric acid, and sometimes nitric acid. When pure it is colourless. Muriatic acid is used in medicine, and in some of the arts as a solvent of metals.

MUSCAT, a fortified seaport town on the E. coast of Arabia, and chief commercial emporium of the Persian Gulf, lies in lat. 23° 38′ N., long. 58° 41′ E. Population, including Muttrah, 60,000, composed of Arabs, Banyans, and a few Persian merchants. It is the capital of a sultan, whose patrimonial dominion is the surrounding territory of Oman, but who claims the whole coast from Cape Aden to Cape Ras al Had, thence northwards as far as Bussorah, including the islands of Bahrein, with all the African shore and adjacent islands from Cape Delgado to Cape Guardafui. He rents, besides, sulphur mines and several estates in Persia.

The harbour of Muscat is formed by a small island, consisting of a huge mass of granite, 200 feet high, situate so near the mainland as only to allow the free passage of small vessels. The town is one of the hottest places in the world, Fahrenheit, though about 50° in January and February, ranging between 90° and 115° in July and August. The trade is considerable. Besides an extensive intercourse with the interior by means of caravans, Muscat is frequented by vessels from the shores of the Persian Gulf, the Red Sea, and from the east coast of Africa; and the produce of all the countries adjoining these places is generally found in the market. Trade is also carried on with Mauritius, India, China, and the Eastern Islands. The chief exports are dates, horses, raisins, wheat, salted and dried fish, sharks' fins, pearls, and drugs. The imports are rice, cotton, and woollen goods, iron, lead, sugar, and some spices; and the value annually imported is estimated at £900,000.

The maund of 24 cuchas = 8 lbs. 12 oz. avoird. The integer of account is the mahomodee of 20 gazees. The mahomodee is a silver coin, of which 11 are reckoned equal to a Spanish dollar. The gazee is of copper; as is also the shaka, valued at from 72 to 80 per dollar. Foreign coins circulate, but are generally transferred by weight.

A convention with Britain, dated May 31, 1839, and ratified July 22, 1840, contains, among other provisions, a stipulation that no duty exceeding 5 per cent. shall be levied at the place of entry in the sultan's dominions on British merchandise imported in British vessels, which shall be in full of all import, export, tonnage, and license duties, and of any other government impost upon the vessel, or upon the goods; nor shall any charge be made on account of goods remaining on board unsold, nor on vessels entering to refit or for refreshments. A similar treaty was effected by the Americans on September 21, 1833.

The present sultan is distinguished for energy and intelligence; and the protection he affords to property is so efficient that the Banyans have formed a marine insurance society, of which the Arab traders generally avail themselves. He possesses a considerable navy, and his subjects are excellent seamen.

MUSCLE, a shell-fish (*Mytilus edulis*), abundant on our seashores, and largely used as food, though opinions differ as to its wholesomeness. The finest are the "Hambleton Hookers" of Lancashire; they are taken out of the sea, and fattened in the river Wyre, within reach of the tide.

MUSHROOM, a tribe of fungus plants (*Agaricus*), some species of which are used for pickling, catsup, powder, and for dressing fresh. Their season in England is September; and the most delicate are those found on old close-cropt pastures, or open downs by the seashore. Many kinds are poisonous, and it is only by experience that the eatable varieties can be distinguished. That usually cultivated is the *A. campestris*. The properties of mushrooms are better understood on the Continent than in England; more particularly in Russia, where they constitute an important article of food.

MUSICAL INSTRUMENTS may be arranged into three classes, namely, wind instruments, stringed instruments, and those in which the sound is produced by concussion. Their manufacture and sale affords employment to a considerable number of persons in this country, more especially in London, and, though to a smaller extent, in Edinburgh and Dublin. But the peculiar nature of the trade places it in a great degree beyond the scope of the present work; some particulars, however, deserving of notice, were furnished to the parliamentary committee on import duties. It appears that British pianos excel all others; and that though in Germany, in consequence of more diffused musical habits, they are currently made for £10 or £12, our manufacturers do not dread the abolition of tariff protection, owing to the superior tone and durability of their instruments; the best harps and flutes are also made in England; but the finest brass wind-instruments are imported. The timber employed for the sound boards of good stringed instruments is said to be "Swiss deal;" for those of an inferior kind, American pine is used.

With respect to the violin, the "sovereign of the orchestra," it has been remarked, that "the best can now be said to be made nowhere." This instrument, however, improves by age, and many of the old ones are of great value. The finest in the world are those of the Amati family of Cremona, who flourished in the 16th century. The chief other makers are Stradivarius, the elder and the younger, and Guarnerius, also of Cremona, in the 17th century; and Stainer, a native of the Tyrol. A good-toned violin cannot be bought in England or France for less than £50, and many have been sold for £250. An instrument made by Stradivarius can always be sold for £100.

Musical instruments, mostly pianos, are exported in considerable quantities, principally to the colonies, India, and S. America. The importations, embracing a variety of instruments, amount annually to about £12,000.

MUSK (Fr. *Musc*. Ger. *Bisam*. It. *Muschio*. Rus. *Kabarga*), a fragrant substance secreted in a glandular pouch under the belly of the male of the musk-deer (*Moschus Moschiferus*), which inhabits the elevated regions of Asia. Musk in its recent state has the consistence of an electuary of a reddish-brown colour; but by keeping it becomes dry and crumbly. The best comes from China in small round bags, covered with brownish hairs, and containing at the most 1½ drachm, large-grained, and of a deep brown colour, and a strong ammoniacal smell. The Siberian or Russian musk is greatly inferior. It is small-grained, light brown, of a weaker and more fetid smell, with little ammoniacal odour; the bags longer and larger. Musk from its high price is often adulterated, more especially when purchased in grains, and not in the natural bags of the animal. It is an article of the materia medica, and is extensively used as a perfume. It should be preserved in closely stopped glass bottles, in a place neither very dry nor too damp.

MUSQUASH, largely used as a "hatting-fur," is the skin of the musk-rat, a diminutive species of beaver. [Fur.]

MUSLIN, a fine thin cotton fabric, extensively manufactured in Glasgow and Manchester. It is used for handkerchiefs, ladies' caps, gowns, frills, and other purposes; and there is a great variety of kinds and qualities,—as book-muslin (a starched or dressed kind), cambric-muslin, jaconet, mull, and others. Dacca, in Bengal, was formerly celebrated for its muslins, some rare specimens of which have been poetically described as "webs of woven wind." [Cotton Manufacture.]

MUSTARD (Du. *Mostert*. Fr. *Moutarde*. Ger. *Mustert*), a plant (*Sinapis*) cultivated in Britain chiefly for its seeds. These when bruised form a bright yellow powder, of a pungent smell and acrid taste, called flour of mustard, which is used as a condiment, and for various purposes in medicine. There are two kinds, a black (*S. nigra*), and a white (*S. Alba*); the first was formerly preferred, being more pungent, and of a much finer quality; but as the flour made from it retains a darkness of colour, from which that of the white variety is free, and as, besides, less labour is required in the manufacture of the latter, it is now more generally employed in Britain, either alone or in mixture with the other. The manufacture of mustard was first understood and practised in Durham, but it is now common in other parts of England.

MYROBALANS, a name given to several species of dried fruits of the plum kind, employed in dyeing and medicine by the natives of India. Five species are described by Mr Milburn in his Oriental Commerce. They are not used in this country.

MYRRH (Arab. *Murr.* Fr. *Myrrhe.* It. & Sp. *Mirra.* Ger. *Myrrhen*), a gum resin, celebrated from the earliest ages for its aromatic and fragrant properties, is the product of a small tree (*Balsamodendron myrrha*) found in Nubia and Arabia Felix. Several kinds are distinguished. The best, myrrh in tears, is when good of a yellow or reddish-yellow colour, light, brittle, pellucid, and sometimes shining; fracture vitreous or conchoidal, of a bitter aromatic taste and peculiar smell. Sp. gr. 1·36. It is mostly imported from the Levant. The East Indian is in large opaque pieces, generally covered with a brownish-white powder. Myrrh in sorts is the name given to a variety of inferior and adulterated kinds. This gum-resin is at present used as a stimulating medicine, and as an ingredient in tooth-powders.

N.

NAILS (Fr. *Clous.* Ger. *Nägel, Spiker.* It. *Chiodi.* Por. *Pregos.* Rus. *Giuosdi.* Sp. *Clavos*) are made in most towns of the United Kingdom, but chiefly at Dudley, Stourbridge, Walsall, and other places near Birmingham, where about 25,000 persons are employed in this manufacture. The best are made by the hand at the common forge, but vast numbers are now produced by machinery. In Birmingham, well-formed nails are cut out of sheet-iron with the greatest rapidity; neatly-shaped heads are given to them by powerful pressure; while in the process of annealing a tenacity is communicated to them which almost rivals the productions of the forge. About 5500 tons are annually exported.

NANKIN, a Chinese cotton cloth, which, in point of strength, durability, and essential cheapness, is unrivalled by any of the cotton fabrics of Europe. The best is the produce of Kiang-nan or Nan-kin; and an inferior description is manufactured in Quang-tung. It is either white, blue, or brownish-yellow; the last being the result of dye, and not the natural colour as vulgarly supposed. Nankin is now little used in England; but the consumption in warm countries is still considerable. The quantity got up at Canton for the foreign market is very variable. Under the British flag alone, in 1831, there were exported 925,200 pieces, valued at £107,323. In later years, the quantity has been much smaller; in 1834, it had fallen to 65,900 pieces. Imitation nankins are made in this country, but they are inferior to those of China.

NAPHTHA, a peculiar liquid hydrocarbon or species of bitumen, which is both a natural and artificial product. Natural naphtha is found at Baku on the Caspian, at Hit on the Euphrates, and other places in Mesopotamia; in Italy, near Piacenza, and of an inferior quality near Modena; and a similar liquid is obtained by the distillation of petroleum and caoutchouc. *Coal naphtha* or *coal oil*, the kind chiefly used in this country, closely resembles the former, and is one of the results of the distillation of pit-coal in gas-works, from which it is usually obtained. Naphtha is of a yellowish-white colour, transparent, and fluid as water, inflammable, and very volatile. The purest Persian and Italian variety has a strong bituminous but not disagreeable odour; Sp. gr. ·760. The coal naphtha has a penetrating and unpleasant odour; Sp. gr. ·840. It dissolves the greater number of the essential oils, and the resins; and is extensively used for dissolving caoutchouc to render cloth waterproof, and for forming surgical instruments. It is also burnt instead of alcohol in lamps for heating small vessels. In Genoa naphtha is used in the street-lamps.

NAPLES, KINGDOM OF, forming with the island of SICILY, described separately, the "Kingdom of the Two Sicilies," occupies the southern extremity of Italy, being bounded N.W. by the Papal States, and on every other side by the sea. Area 31,600 sq. miles. Population in 1838, 6,021,284. It contains 15 provinces, which are divided into 53 districts, and subdivided into 1790 communes. The government is a hereditary monarchy, with few restrictions.

The territory of Naples, after forming for some space a continuation of the long narrow peninsula of Italy, branches finally into the two smaller peninsulas of Otranto and Calabria. The Apennines fill its interior, shooting out arms to its bounding promontories; in many places spreading wider, and assuming still more rugged and awful forms than in the northern part of their line. They leave, however, along the coast wide plains and extended valleys, blessed with the richest soil, and (except in some marshy tracts on the coast) with the most genial climate of any country in Europe. The rivers are numerous, but inconsiderable in point of size; and from bars at their entrance are impassable except for very small craft.

A stimulus was given to improvement during the French occupation, more especially by the abolition of the feudal system by Joseph Bonaparte in 1806; still comparatively little has been done to develop the great natural resources of the kingdom. In many places property is rendered insecure by banditti, and the great bulk of the people are sunk in a state of brutish indolence. Rock salt, coal, and other minerals abound, but scarcely any attempt has been made to work them. Agriculture is in the most rude condition; roads are neglected; and corn (mostly wheat, maize, and rye), wine, oil, silk, flax, hemp, cotton, and fruit, the staples of the soil, might be raised in quantities equal to four or five times the consumption of the inhabitants. A miserable cotton manufactory, a sort of government monopoly established at Salerno, the iron forge and mine at Stilo, the glove and hat manufactories at Naples, with coarsely made linens and cloths, are stated by Mr Macgregor to comprise nearly all the branches of manufacturing industry.

This low state of productive labour, joined to oppressive duties and impolitic prohibitions, confines the external trade within comparatively narrow limits. The imports consist principally of cottons, woollens, linens, hardware, and other manufactures; cod-fish and pilchards; colonial produce, dye-stuffs, and metals, especially iron. The exports embrace olive-oil, silk, flax and hemp, wool, wine, corn, linseed, rags, maccaroni, cream of tartar, skins, liquorice, &c. Mr Macgregor, in his Commercial Report (p. 63), states the amount of the former, in 1837, at £2,311,937, and of the latter at £1,701,949. The chief commercial relations are with France, Britain, Austria, and the Sardinian states.

Naples, the chief port, capital, and emporium of the foreign trade, is beautifully situated on a bay of the same name, in the vicinity of Mount Vesuvius, in lat. 40° 50′ N., long. 14° 16′ E. Pop. 360,000. The harbour is formed by a projecting mole, nearly in the form of the letter L, within which the water is from 3 to 4 fathoms deep, but only small vessels can approach the town. The bay is deep, and there is no bar, but it is a good deal exposed to S.W. winds. According to Mr Macgregor (*Report*, *&c.* 1840), the principal exports in 1838 were 5,074,559 gallons olive-oil; 2436 casks wine; 595,657 lbs. cream of tartar; 286,111 lbs. silk; 362 tons argols; 966 tons bones; 10,790 bundles hoops; 744 tons figs; 1780 tons wheat; 1443 tons linseed; 1090 tons hemp; 348,164 pairs gloves; 678 tons liquorice paste; and 628 tons madder root. In the same year there cleared out 1227 vessels: whereof Neapolitan, 1051; British, 80; French, 22; and Sardinian, 43. The customs duties amount annually to about £580,000.

The only other harbour on the Mediterranean coast is that of Gaeta; on the eastern coasts are the ports of Bari, Taranto, and Brindisi; Gallipoli, the great oil mart, has merely a roadstead.

MEASURES, WEIGHTS, MONEY, BANKS, &c.

Measures and Weights.—The canna or ell of 8 palmi or 96 inches = 83·06 Imp. inches; the passo is 7½ palmi. The Neapolitan mile of 7000 palmi = 2018 Imp. yards.

The moggia, land measure, of 900 square passi = 0·8315 Imp. acre.

The baril, wine or brandy measure, of 60 caraffi = 9·60 Imp. gallons; the carro is 2 botte, or 24 barili; and the pipe is 14 barili: the salma, oil measure, of 16 staja, or 256 quarti = 34·91 Imp. gallons, and weighs about 324½ lbs. avoird.

At Gallipoli, the oil salma of 10 staja or 320 pignatte = 34·11 Imp. gallons. At Bari, the salma = 36·42 Imp. gallons.

The tomolo, corn measure, of 2 mezzetti or 4 quarti = 1·519 Imp. bushel, or 100 tomoli = 19 Imp. quarters nearly; the carro of 36 tomoli = 6·84 Imp. quarters.

The cantaro grosso of 100 rottoli = 196·45 lbs. avoirdupois; the cantaro piccola of 150 pounds each of 12 oz. = 106·07 lbs. avoirdupois. Gold and silver are weighed by the libbra or pound of 12 ounces, 360 trapesi, or 7200 acini = 4950 troy grains; their fineness is expressed decimally.

Money.—The integer of account is the ducat, sometimes termed *del Regno*, which is divided into 100 grani, each of 10 cavalli; also into 5 tari or 10 carlini. The ducat being equal 3s. 3¾d., the tari is worth about 8d., the carlin 4d., and the grano 2-5ths of a penny.

The coins, according to the system introduced in 1818, are as follow:—In gold; the oncetta of 3 ducats (weight 85 acini, fineness 996 milliemes) = 10s. 3½d. sterling, with pieces for 10, 5, and 2 oncetta in proportion:—In silver; the ducat of 10 carlini (weight 515 acini, fineness 833⅓ milliemes, or ⅚) = 3s. 3¾d., with pieces for 12, 6, 5, 4, 3, 2, and 1 carlini of proportional value:—In copper; pieces for 5, 3, 2, 1, and ½ grani. There are, besides, a variety of old coins.

The par of exchange with London, deduced from the ducat in silver, which is the standard, is 6 ducats 3¾ grani, or, as commonly expressed, 603¾ grani per £1.

Usance of bills from Britain, Portugal, and Russia, 3 months' date; from France, Spain, Holland, and Germany, 2 months' date; from Leghorn, Rome, Genoa, and Sicily, 22 days' sight. Inland bills are drawn at 15 days' sight.

Banks, &c.—The Bank of the Two Sicilies is a government deposit bank, the orders or checks on which, being paid in cash on demand, circulate extensively in Naples, on the same footing as specie. There is also a government discount office; and most of the principal merchants engage more or less in banking operations.

Finances.—The annual revenue (including a quota of nearly £500,000 from Sicily), amounts to about £4,350,000, derived partly from direct and partly from indirect taxes, the most important of the former being a land-tax of 25 per cent. The principal other sources are customs, tolls, a salt monopoly, lotteries, and registrations. The whole national debt is estimated at £20,000,000.

Of the Neapolitan debt, £2,500,000 were raised in England in 1824, on 5 per cent. bonds of £100 each, which were issued at 92½ per cent.: the dividend coupons are payable February 1, and Aug. 1, without deduction, at Messrs Rothschild. The other securities are in bonds of 500 ducats each, bearing 5 per cent. interest; transactions in which, in the London market, take place at the fixed double exchange of fr. 4. 40 c. per ducat, and fr. 25. 65 c. per £1.

The Duties on admitted articles are oppressive, ranging from 50 to 150 per cent. *ad valorem*, and a great variety of foreign commodities are prohibited. The export duties are also very high; and the bonding of goods is not permitted. In fact, in point of commercial legislation, Naples may be said to occupy the very lowest position among states having any pretension to civilisation.

NATIONAL DEBT. [FUNDS.]

NATRON, a native sesquicarbonate of soda, found in Egypt, Mexico, &c.

NAVIGATION LAWS, a name commonly applied to those statutes which have for their object the securing of the carrying trade of the country to British-built ships, owned and navigated by British subjects. Some traces of this legislation are to be found in acts passed by Richard II. in 1381 and 1390; though in general the ancient policy of England seems to have afforded no protection to the shipping by means of exclusive privileges. Bacon, in his Life of Henry VII., remarks, that "almost all the ancient statutes incite by all means to bring in all sorts of commodities, having for end cheapness, and not looking to the point of state concerning the naval power." That monarch, however, from his "care to make his realm potent at sea as well as by land," passed an act in 1485 prohibiting the importation of Gascon wine, except by English vessels; but it did not go the length of excluding foreign shipping in all circumstances: the "stranger's ship" was only to be rejected if the merchant "might have sufficient freight in the same port in a denizen's ship." Yet from this time we may date the commencement of that policy which was matured in an act passed by the Long Parliament in 1651, a famous statute, which, as afterwards confirmed (in 1660) by 12 Ch. II. c. 18, is known by the name of the *Navigation Act*. It provided generally that no merchandise, either of Asia, Africa, or America, should be imported into England in any but English-built ships, navigated by an English commander, and manned, to the extent of three-fourths of the crew, by Englishmen; and that certain enumerated articles of European merchandise (embracing, it may be remarked, all the bulky and most important productions of the Continent), as well as all Russian and Turkish goods, should not be imported in foreign ships, except such as should be brought directly from the country or place of its growth or manufacture in ships belonging to such country or place. Besides these exclusive privileges granted to English shipping, the end aimed at was further attempted to be secured by the imposition of discriminating duties, so that goods which might still be imported in foreign ships from Europe, were in that case more highly taxed than if imported in our own vessels.

The Navigation Act was mainly levelled at the Dutch, who, by superior economy and skill, had succeeded in engrossing nearly the whole of the carrying trade of Europe; and there can be little doubt that it dealt a heavy blow at their maritime prosperity; though it does not follow that it benefited the English to the same extent to which it injured their rivals. With the present amount of our knowledge, it would be difficult to arrive at the conclusion that the trade of the country could possibly be promoted by compelling our merchants to employ dear instead of cheap ships. Nevertheless, the system above described was long looked upon as a monument of wisdom and prudence; and the stimulus which it imparted to maritime enterprise is alleged by its admirers to have had the effect of placing the naval power of the country on a far broader and firmer basis than it ever could otherwise have attained. The first deviation from the system sanctioned by parliament was effected by a treaty concluded by Mr Vansittart (now Lord Bexley), in 1815, with the United States of America, which, soon after the establishment of their independence, had followed our example, by enacting a navigation law copied from that of the mother-country; "and it affords," remarks Mr Porter, "an instructive lesson that the practical carrying out of this restrictive system to its fullest extent by the two nations, was found to be so unproductive of all good effect, as to call for its abandonment. By this treaty, the ships of the two countries were placed reciprocally upon the same footing in the ports of England and the United States, and all discriminating duties chargeable upon the goods which they conveyed were mutually repealed. It adds greatly to the value of this concession, that it was made by no disciple of free-trade doctrines, but was forced, by the very consequences of the system itself, from a government strenuously opposed to all change in the direction of relaxation."—(*Progress of the Nation*, § 3, c. 9.)

In a few years afterwards, the progress both of opinions and of events forced on further modifications of the exclusive system. In 1822, Mr (now Lord) Wallace, then President of the Board of Trade, introduced five bills (3 Geo. IV. c. 41, 42, 43, 44, and 46), which mitigated to a large extent many of the provisions of the law; and in the following year circumstances arose which compelled a still further relaxation. From various causes, foreign countries had up to this time, in general, submitted to the discriminating duties imposed upon their vessels in our ports, without retaliation. But it now clearly appeared that this forbearance was to be continued no longer. In 1823, Prussia notified, that until an alteration of our system was made in favour of her vessels, similar heavy duties would be imposed upon British shipping that should enter any of her ports; and it was obvious that a corresponding movement would have soon followed in other countries. Our merchants having in consequence become clamorous for the interference of the government to obtain the removal of the retaliatory duties, Mr Huskisson carried through parliament the celebrated *Reciprocity Acts*, 4 Geo. IV. c. 77, and 5 Geo. IV. c. 1. These statutes authorized the crown to permit the importation and exportation of merchandise in foreign vessels at the same duties as were chargeable when imported in British vessels, in favour of all such countries as should not levy discriminating duties upon merchandise carried into their ports in British vessels; also to levy upon the vessels of such countries, when frequenting our ports, the same tonnage rates as are chargeable upon our own vessels. At the same time, the crown was empowered to impose additional duties upon goods and shipping against any countries which should levy higher duties in the case of the employment of British vessels in the trade with these countries. Under these acts, reciprocity treaties were concluded in 1824 with Prussia, Hanover, Denmark, and Oldenburg; in 1825, with Mecklenburg, Bremen, Hamburg, Lubec, States of La Plata, and Colombia; in 1826, with France, Sweden and Norway, and Mexico; in 1827, with Brazil; in 1829, with Austria; in 1834, with Venezuela; in 1837, with Greece, Holland, and Bolivia.

Other relaxations of the navigation laws have been since granted to particular states by treaty, particularly Austria and the Hanse Towns, for an account of which, we refer to the heads AUSTRIA and LUBEC; while farther information on the subject of this article will be found under SHIPPING.

The following is an abridgment of the Navigation Act at present in force:—

Abridgment of an Act for the Encouragement of British Shipping and Navigation, viz. 3 & 4 Wm. IV. c. 54, with the Amendments of later Enactments, viz. 4 & 5 Wm. IV. c. 89; 1 & 2 Vict. c. 113; and 3 & 4 Vict. c. 95.

§ 1. Act 6 Geo. IV. c. 109 and succeeding acts consolidated.

§ 2. The sorts of goods after enumerated, being the produce of Europe, viz. masts, timber, boards, tar, tallow, hemp, flax, currants, raisins, figs, prunes, olive oil, corn or grain, wine, brandy, tobacco, wool, shumac, madders, madder roots, barilla, brimstone, bark of oak, cork, oranges, lemons, linseed, rapeseed, and cloverseed, must not be imported for home use, except in British ships, or in ships of the country of which the goods are the produce, or in ships of the country from which the goods are imported.

§ 3. Goods, the produce of Asia, Africa, or America, must not be imported from Europe for home use, except the goods after mentioned, viz.:—Goods, the produce of the dominions of the Emperor of Morocco, which may be imported from places in Europe within the Straits of Gibraltar: Goods, the produce of Asia or Africa, which (having been brought into places in Europe within the Straits of Gibraltar, from or through places in Asia or Africa within those straits, and not by way of the Atlantic) may be imported from places in Europe within the Straits of Gibraltar: Goods, the produce of places within the limits of the East India Company's charter, which (having been imported from those places into Gibraltar or Malta in British ships) may be imported from Gibraltar or Malta: Goods taken by way of reprisal by British ships: bullion, diamonds, pearls, rubies, emeralds, and other jewels or precious stones.

§ 4. The produce of Asia, Africa, or America, cannot be imported for home use in foreign ships, unless these be of the country of which the goods are the produce, and from which they are imported, except the goods after mentioned, viz.:—Goods, the produce of the dominions of the Grand Seignior in Asia or Africa, which may be imported from his dominions in Europe, in ships of his dominions: Raw silk and Mohair yarn, the produce of Asia, which may be imported from the dominions of the Grand Seignior in the Levant Seas, in ships of his dominions: Bullion. [Authority is given to make treaties with countries on the Mediterranean, that the productions of Asia and Africa may be imported in the ships of such countries, as well as in British ships, 1 & 2 Vict. c. 113, § 30.]

§ 5. Manufactured goods are deemed the produce of the country of which they are the manufacture.

§ 6. No goods can be imported from Guernsey, Jersey, Alderney, Sark, or Man, except in British ships.

§ 7. No goods can be exported to any British possession in Asia, Africa, or America, nor to Guernsey, Jersey, Alderney, Sark, or Man, except in British ships.

§ 8. No goods can be carried coastwise, except in British ships.

§ 9. No goods can be carried from any of the islands of Guernsey, Jersey, Alderney, Sark, or Man, to any other, nor from one part to another of any one of these islands, except in British ships.

§ 10. A similar rule applies to British possessions in Asia, Africa, or America.

§ 11. No goods can be imported into any British possession in Asia, Africa, or America, in foreign ships, unless they be of the country of which the goods are the produce, and from which they are imported.

§ 12. No ship is admitted to be a British ship unless registered and navigated as such; and every British registered ship (so long as the registry is in force, or the certificate retained) must be navigated during the whole of every voyage (whether with a cargo or in ballast), by a master who is a British subject, and by a crew, of which three-fourths at least are British seamen; and if such ship be employed in coasting from one part of the United Kingdom to another, or between the United Kingdom and Guernsey, Jersey, Alderney, Sark, or Man, or from one of these to another, or from one part to another of any one of these islands, or be employed in fishing on the coasts of the United Kingdom, or of any of these islands, the whole of the crew must be British seamen.

§ 13. But British-built vessels under fifteen tons burthen, wholly owned and navigated by British subjects, though not registered as British ships, are admitted to be British vessels, in all navigation in the rivers and upon the coasts of the United Kingdom, or of the British possessions abroad, and not proceeding over sea, except within the limits of the respective colonial governments within which the managing owners respectively reside; and all British-built vessels wholly owned and navigated by British subjects, not exceeding thirty tons, and not having a whole or a fixed deck, and being employed solely in fishing on the banks and shores of Newfoundland, and parts adjacent, or on the banks and shores of Canada, Nova Scotia, or New Brunswick, adjacent to the Gulf of St Lawrence, or on the north of Cape Canso, or of the islands within the same, or in trading coastwise within the said limits, are admitted to be British boats or vessels, though not registered.

§ 14. All ships built in the British settlements at Honduras, and owned and navigated as British ships, are entitled to the privileges in all direct trade with the United Kingdom or the British possessions in America, provided the master produce a certificate under the hand of the superintendent of the settlements, that satisfactory proof has been made before him that the ship (describing the same) was built there, and is wholly owned by British subjects; and that the time of the clearance from the settlements for every voyage be indorsed on the certificate by the superintendent.

§ 15. No ship is admitted to be of any particular country, unless she be of the build thereof; or be a prize of war; or forfeited to the country under a law for the prevention of the slave-trade, and condemned by a competent court; or be British-built (not having been a prize of war from British subjects to any other foreign country); nor unless the master and three-fourths of the crew are subjects of the country; nor unless she be wholly owned by subjects of such country usually residing therein, or under the dominion thereof. The country of every ship is deemed to include all places which are under the same dominion as the place to which the ship belongs.

§ 16. No person is qualified to be a master of a British ship, or a British seaman within the meaning of the act, except British subjects or persons who have served on board ships of war in time of war for three years; but natives of places within the limits of the East India Company's charter, although under British dominion, are not, upon the ground of being such natives, deemed to be British seamen. Every ship (except ships required to be wholly navigated by British seamen) navigated by one British seaman (if a British ship, or one seaman of the country of such ship, if a foreign ship) for every twenty tons, is deemed duly navigated, though the number of other seamen should exceed one-fourth,—the act not to affect the laws with respect to trade from and to places within the limits of the East India Company's charter.

§ 17. By royal proclamation during war, foreigners, having served two years on board any ships of war in time of such war, may be declared British seamen within the meaning of the act.

§ 18. No British registered ship must be suffered to depart to or for any British possession in any part of the world (whether with a cargo or in ballast), unless duly navigated. British ships, trading between places in America, may be navigated by British negroes, and ships trading eastward of the Cape of Good Hope within the limits of the East India Company's charter may be navigated by lascars, or other natives of countries within those limits.

§ 19. The master or owners of ships forfeit for every foreign seaman on board, contrary to the act, £10; but if a due proportion of British seamen cannot be procured in any foreign port, or in any place within the limits of the East India Company's charter; or if the proportion be destroyed during the voyage by any unavoidable circumstance, and the master produce a certificate of such facts under the hand of any British consul, or of two known British merchants, if there be no consul at the place where such facts can be ascertained, or from the British governor of any place within the limits of the East India Company's charter; or, in the want of such certificate, make proof of the truth of such facts to the satisfaction of the collector and comptroller of any British port, or of any person authorized in any other part of the world to inquire into the navigation of such ship, she is deemed to be duly navigated.

§ 20. The necessary proportion of British seamen may at any time be reduced by proclamation.

§ 21. Goods, not otherwise prohibited than by the law of navigation, as above, may be imported from any place in a British ship, and from any place not being a British possession in a foreign ship of any country, and however navigated, to be warehoused for exportation only.

§ 22. Goods imported, exported, or carried coastwise, contrary to the law of navigation, are forfeited, the master incurring a penalty of £100.

§ 23. Penalties, &c., are recovered and used, as directed by act 3 & 4 Wm. IV. c. 53, for the prevention of smuggling.

[By 3 & 4 Vict. c. 95, the Queen in council may appoint any port which is the most convenient for shipping the produce of a state, to be held (under the limitations in the order) as a shipping port for that state, though situated in a different country. The act was passed to carry out a treaty to admit Austrian vessels from the Turkish ports on the Danube.]

NEEDLES are made from the best steel, reduced by a wire-drawing machine to the suitable diameter. The manufacture, supposed to have originated in Spain, was introduced into England about 1565 by Elias Krause, a German, who then settled in London. At present it is carried on chiefly at Redditch in Worcestershire, Hathersage in Derbyshire, and in and near Birmingham.

Dr Ure states that "the construction of a needle requires about 120 operations; but they are rapidly and uninterruptedly successive. A child can *trim* the eyes of 4000 needles per hour. When we survey a manufacture of this kind, we cannot fail to observe, that the diversity of operations which the needles undergo bears the impress of great mechanical refinement. In the arts, to divide labour, is to abridge it; to multiply operations is to simplify them; and to attach an operative exclusively to one process, is to render him much more economical and productive."—*Dictionary of Arts*, &c. p. 885.

NETHERLANDS, KINGDOM OF THE, OR **HOLLAND,** lies between lat. 51° 12′ and 53° 28′ N., and between long. 3° 20′ and 7° 12′ E.; and is bounded N.

and W. by the North Sea, S. by Belgium, and E. by Rhenish Prussia and Hanover. Provinces: N. Brabant, Guelderland, N. Holland, S. Holland, Zealand, Utrecht, Friesland, Overyssel, Groningen, and Drenthe. Area, 11,860 sq. miles; and population in 1838, 2,583,271: this is exclusive of the portions of Limburg and Luxemburg subject to the Netherlands crown, the joint area of which is 1738 sq. miles, and population 332,000. Government, a constitutional monarchy: the executive power is vested in the king; the legislative in the king and the states-general, consisting of a first chamber, the members of which are appointed by the king for life, and a second chamber of deputies chosen by provincial assemblies. All new laws are proposed by the king to the second chamber.

This country is composed of the lowest part of the great plain of Northern Europe, its level being indeed in many places below that of the sea, against which it is protected,—partly, as in Zealand, Friesland, and Guelderland, by enormous dikes, and partly, as between the Helder and the Hook of Holland, by sandhills or *dunes* cast up by the ocean upon the shores; though, despite every precaution, it has often suffered greatly from inundations. The whole, saving some slight elevations in Guelderland, Utrecht, and Overyssel, forms one unbroken flat, without a hill or rock, without forests, or, except in the south part, running waters; the land consisting mainly of moor and marsh, traversed, like net-work, by numerous canals, which, while they are absolutely necessary to drain it, and render it fit for cultivation, answer, for the most part, the purposes of roads,—many of them indeed being navigable for large vessels. The astonishing ingenuity, industry, and perseverance by which the Netherlands is thus protected against inundation, and rendered at once available for cultivation and internal communication, has been amply rewarded, for the country is exceedingly fertile, and, excepting England, is, for its size, the richest, most populous, and most powerful in the world.

In the northern provinces the principal natural feature is the Zuyder Zee, a shallow inland sea, separating North Holland from Friesland and Overyssel: there are also numerous lakes, the chief being the Haarlem-meer, a wide expanse in the vicinity of that city and Amsterdam. In the southern provinces the leading feature is the Rhine or Waal, and its tributary the Meuse, which enter the sea by various channels, though chiefly by way of Dort and Rotterdam. Several parts of the kingdom are likewise distinguished for extensive marshes,—as the Bourtang on the N.E. frontier, and the Peel in N. Brabant. The extraordinary number of water-courses throughout the country, and its peculiar situation, render the climate moist and foggy; and being besides excessively warm in summer, and cold in winter, only that scrupulous attention to cleanliness for which the inhabitants are distinguished, can protect them from the deleterious effects of their atmosphere.

The humidity of the climate, and the demand for animal food for the numerous cities, have connected their rural industry principally with pasturage; and the produce of the dairy is brought to such perfection as to form an important object of exportation. The number of horned cattle is estimated at 1,000,000; of sheep at 700,000; and of horses at 200,000; swine also are numerous. The corn raised, however, is insufficient for the home consumption. According to a communication from Sir A. Ferrier to our government in 1842, the produce of the grain crop of 1841 (nearly an average one), was, in Imperial quarters, as follows:—Wheat, 645,000; rye, 537,500; barley, 322,500; oats, 344,000; beans, 86,000; pease, 64,500; and buckwheat, 193,500. The chief other products of the soil are, potatoes, flax near Dort, &c.; hemp, tobacco (4000 tons), around Amersfort, Rhenen, &c.; madder, in S. Holland; rapeseed, chicory, mustard, and beet; and flowers near Haarlem, &c. The kingdom possesses few if any minerals.

The fisheries, once a principal source of wealth, have greatly declined. Only about 80 busses are now employed in the herring-fishery; the cod-fishery on the Dogger-bank, and the whale-fishery, are also on a much smaller scale than formerly.

The principal manufactures are those of woollens in Leyden and Utrecht: silks in Utrecht, Haarlem, and Amsterdam; cottons at Haarlem; tobacco pipes at Gouda; and paper, leather, sugar-refining, painters' colours, and cordage in various places. The distilling of geneva is prosecuted extensively at Schiedam; and shipbuilding at Rotterdam and Amsterdam. The government, with the view of encouraging manufactures, allow coal for their use to be imported free, though a high duty is levied upon it for other purposes, in order to promote, by the consumption of peat, the formation of *polders*, a name given to marshy plots when enclosed and drained.

Commerce, however, has always been pre-eminently the national pursuit of the Dutch. The greatness of the trade of Holland during the 17th century, and its decline in the 18th, have been already noticed [COMMERCE]. After the revolution in France, Holland became first a vassal, and then a province of that kingdom, and being in consequence engaged in a constant war with Britain, it lost its ships, its colonies, its commerce, and its public credit. On the return of peace the settlements of Berbice, Demerara, and Essequibo, with the Cape of Good Hope and Ceylon, were retained by Britain; but she restored Java, the Moluccas, and other possessions in the Eastern Islands, along with Surinam, several West India Islands, and various posts on the Guinea coast. Trade afterwards revived in a very remarkable manner, though it has never recovered its former magnitude. Of late years it has benefited greatly from the improved administration of Java, which, with the other colonies, was retained by Holland on the dissolution of its union with Belgium in 1830, and the possession of which has been since confirmed to her. [JAVA. EASTERN ISLANDS. GUIANA. NIGRITIA. WEST INDIES, &c.]

The imports into Holland consist at present chiefly of tropical and colonial produce; corn, salt, tea, wine, timber, coal, and hides; British, German, and French manufactures; freestone and granite blocks for the dikes. The national exports consist mostly of cheese, butter, flax, hemp, madder, geneva, oak-bark, rape and linseed oils, oil-cake, tobacco-pipes, and seeds. But the exports likewise embrace the reshipment of a large portion of the commodities of import; and more especially of those brought from the colonies, and from the Baltic and Rhenish States, which are carried to the ports of Holland as a convenient entrepôt for their distribution. The port which shares most largely in this transit or entrepôt trade is Rotterdam, owing to its position at the mouth of the Rhine, and its general accessibility. We possess no account of the aggregate amount of imports and exports; but, according to a recent statement, the shipping cleared outwards amounts annually to nearly 6000 vessels, having a burden of 800,000 tons; of which, about 330,000 tons were under the national flag; British, 200,000 tons; and Norwegian, 100,000 tons. In 1837, there belonged to Holland 1394 ships, of the burden of 111,824 lasts; which was exclusive of 5600 trek-schuyts, or canal barges, and 15,000 boats employed in the inland trade. The number of vessels trading to the E. Indies from the different ports is 320, in burden 185,000 tons.

The chief commercial relations are with Java and the other colonies, Britain, Germany, the Baltic states, France, and America. The trade with England appears to be on the increase. In 1833, 1837, and 1840, the declared value of the produce and manufactures of the United Kingdom shipped to Holland, was respectively, £2,181,893, £3,040,029, and £3,416,190: about one-half of the whole consists of cotton yarn and twist; the chief other articles are cotton cloths, woollens, iron, linen and woollen yarn, brass and copper wares, coal, painters' colours, and salt. A variety of colonial and foreign commodities are likewise imported from Britain; the principal being cotton-wool, coffee, indigo, tobacco, shellac and lac, copper, tea, Peruvian bark, pepper, pimento, and wine. The exports to the United Kingdom in 1840 consisted of 157,802 cwts. butter, 224,957 cwts. cheese, 113,108 cwts. flax and codilla, 47,575 cwts. madder, 676,404 gallons geneva, 72,842 gallons Rhenish wine, and 171,735 cwts. bark; besides corn, seeds, raw silk, coffee, smalts, nutmegs, and mace from the Moluccas, linseed and rapeseed cakes and oil, fitch, furs, &c.

Corn forms an item of considerable importance in the commerce of Holland, partly from the inadequacy of her own supply, and partly from the convenient situation of Rotterdam, the chief seat of this trade, as an entrepôt for the produce of Rhenish Germany. This port is also, to some extent, a depôt for Baltic corn; while, in certain seasons, her shipments of Netherlands produce are considerable,—Zealand wheat, and Dutch oats, beans, and pease, being in high estimation in Britain. But exports of Netherlands corn have always to be replaced by additional imports. The bonding system, as applied to foreign grain in Holland, is extremely liberal and convenient to the holder. Of late, however, restrictions have been imposed upon importation for consumption, with the view of protecting the agriculturists. From 1820 to 1830, a small fixed duty existed, which, on wheat, was (fl. 7·50 c. per last), equivalent to 1s. 2½d. per quarter: from 1830 to 1835, this was raised to 4s. 9d. per quarter, being quadrupled. In 1836, a sliding duty was introduced, according to the following scale:—When the average price of wheat is lower than 23s. 9d., the duty is 14s. 3d. per quarter; when price 23s. 9d. and under 26s. 2d., the duty is 11s. 10½d. per quarter; when price 26s. 2d. and under 28s. 7d., the duty is 9s. 6d.; price 28s. 7d. and under 33s. 4d., duty 7s. 1½d.; price 33s. 4d. and under 38s. 1d., duty 4s. 9d.; price 38s. 1d. and under 42s. 10d., duty 2s. 4½d.; and when the price is 42s. 10d., or above, the duty is 1s. 2½d. Exportation is free till the price reach 42s. 10d., when a duty of 2s. 10d. is levied. The transit duty on wheat is in all cases 5½d. per quarter. Besides the preceding import duties, there are heavy town dues, as well as a tax upon grinding; so that upon the whole the consumption of corn is rather heavily burdened.

Ports.—*Amsterdam*, the capital of the kingdom, sometimes called the "Venice of the North," is situated in lat. 52° 22′ N., long. 4° 53′ E., at the confluence of the Amstel with the Y, an arm of the Zuyder Zee. It is built on a marsh upon piles. The principal streets are magnificent, and the city, which is crescent-shaped, is intersected by numerous canals, communicating by 280 bridges, and ornamented with trees. Pop. 220,000. The harbour is capacious and secure, admitting the largest vessels close to the quays and warehouses. At the mouth of the Y there is a bar called the Pampus, to cross which large vessels must be lightened; but this inconvenience, as well as the delays and dangers attending the navigation of the Zuyder Zee, has been, since 1825, obviated by a ship-canal, 50½ miles in length, and 20¾ feet in depth, which was then opened between Amsterdam and the Helder,—a noble work which gives to the former all the advantages of a deep-water harbour on the most accessible part of the coast. Amsterdam possesses numerous manufactures, but it is more distinguished for its trade, which, though now much reduced, is still very considerable. The exports, estimated at about £4,000,000 a-year, and the imports, nearly of the same amount, comprehend almost all articles forming the subject of European commerce.

Rotterdam is situated on the Maese, a principal arm of the Rhine, in lat. 51° 55′ N., long. 4° 29′ E., about 20 miles from the North Sea. Pop. 78,000. The streets are intersected by canals, deep enough to receive the largest ships, and the town possesses in other respects, as already noticed, great facilities for trade. It has an extensive transit-trade with Germany, and is the chief seat of the commerce with Britain, with many parts of which it maintains an active intercourse by steamers and packets. It will shortly be connected with Amsterdam by railway. In the year 1840, the number of vessels that entered was 1968, and departed, 2054; the latter, in burden, 265,000 tons. In the same year, the total imports amounted to £7,186,240, including £3,180,480 from Britain; and the total exports, £5,982,200, including £1,097,280 to Britain.

The chief other ports are Harlingen, at the mouth of the canal of Leewarden, in Friesland, Delfzyl on the Ems, Dordrecht on the Waal, and Middleburg and Flushing, in Walcheren.

MEASURES, MONEY, FINANCE, &c.

Measures and Weights.—The modern system, introduced in 1820, is the same as that of France, but with the old Dutch nomenclature.

The elle or metre of 10 palms = 39⅜ Imp. inches nearly, and 100 elles = 109·36 Imp. yards; the mijle or kilometre = 1093⅝ Imp. yards.

The vierkante bunder, or are, of 10 vierkante roedes, or 100 vierkante elles = ·02471 Imp. acre = 3 Imp. perches and 29 square yards nearly.

The vat, or hectolitre (liquid measure), of 100 kans or litres = 22·009 Imp. gallons; the kan is divided into 10 maatjes, or 100 vingerhoeds.

The mudde, zak, or hectolitre (dry measure), of 10 schepels, or 100 kops or litres = 2¾ Imp. bushels nearly; and 100 mudden = 34·390 Imp. quarters.

The wigtje or gramme of 10 korrels = 15·434 troy grains; the pond or kilogramme of 10 ons, 100 loods, or 1000 wigtjes = 2 lbs. 3 oz., and $4\frac{7}{16}$ drams avoirdupois; and 100 ponden = 220·486 lbs. avoirdupois. The apothecaries' new pound of 12 ounces, 96 drachms, 288 scruples, or 5760 grains = 5787 troy grains.

Gold and silver are weighed by the pond, as above; and their fineness is expressed in millièmes as in France. Gold is valued from the fixed price of 1442 flor. 60 cents per pond, with an agio that is usually about 13 per cent.; Silver is valued from the fine weight at a variable price per pond without agio.

The old measures and weights, still retained in many places, are chiefly as follows:—The Amsterdam foot = 11·15 Imp. inches; the Rhineland foot = 12·36 Imp. inches; the Amsterdam ell = 27·08 Imp. inches; the Brabant or Flemish ell = 27·58 Imp. inches. The Dutch league, 19 to the degree, = 3 Imp. miles, 5 fur. 4 poles. 4·98 Amsterdam morgen of 600 square perches, or 4·75 Rhineland morgen, = 10 Imp. acres. The wine stekan of 8 stoops = 4·27 Imp. galls.; the brandy stekan = 4·13 do.; and the beer stekan = 4·32 do.: The Amsterdam ahm of 4 ankers, 8 wine stekans, 64 stoops, 128 mingels, 256 pintes, or 512 mutjes = 34·16 Imp. gallons; the velte contains 3 stoops, the oxhoofd 96, the legger 240, and the vat 6 ahms or 384 stoops; the Rotterdam ahm = 33·32 Imp. gallons. The Amsterdam corn last of 27 mudden, 36 sacks, or 108 schepels = 82·62 Imp. bushels. The troy pound of 2 marks, 16 ounces, 320 engels, or 10240 aas = 7596 troy grains; 1 engel = 7½ carats. The commercial pound of 16 ounces = 7625 troy grains; and the centner of 100 lbs. = 108·93 lbs. avoirdupois.

A last for freight is estimated at 4000 lbs., equal to 2 British tons nearly.

Money.—The monetary unit is the florin or guilder, divided into 100 cents, or 20 stivers, and equal 1s. 8d. sterling nearly; the par of exchange being in gold 12 fl. 10 c., and in silver, 11 fl. 97 c. per £1. Formerly accounts were stated in florins of 20 stivers, each of 16 pfennings; and exchanges were transacted in pounds Flemish of 20 schillings, or 240 grotes. 6 florins = 1 pound Flemish. The rixdollar = 2½ florins or 50 stivers.

The coins are:—In gold; the 10 florin piece (weight 103·85 troy grains, fineness 900 millièmes or $\frac{9}{10}$), equal 16s. 6½d., and the piece of 5 florins: In silver; the florin (weight 166·17 troy grains, fineness 893 millièmes) equal 20·05d.; pieces for 3 and ½ florins; also, but of a lower standard, pieces for 25, 10, and 5 cents: In copper; cents and ½ cents. The above form the currency of the Netherlands, according to ordinance of 1816; but a variety of old coins also circulate, the principal being the gold ducat, value 9s. 4d.; the silver ducatoon, 5s. 3½d.; and the rixdollar, 4s. 2d. nearly.

Usance of bills from London and France, 1 month's date; from Spain, Portugal, and Italy, 2 months' date; from Germany, 14 days' sight; and from Dantzig, Riga, and Konigsberg, 30 days' sight. Days of grace, formerly 6, but now in disuse.

The Bank of the Netherlands was founded in 1814 on the model of the Bank of England; the celebrated old deposit Bank of Amsterdam having ceased to exist on the French invasion in 1796. Its original capital of fl. 5,000,000 (divided into shares or *actions* of fl. 1000) was doubled in 1819. It issues notes, varying in amount from fl. 20 to fl. 1000, discounts bills, and occasionally makes advances on goods, deals in bullion, and coins money for the state.

The Maatschappij, formed in 1825, is a company which has been the means of directing much of the resources and energies of the country to the Eastern trade. The original shares were for fl. 1000 each; and the present capital fl. 97,000,000 (£8,083,333), of which fl. 20,000,000 stand in the name of the abdicated king. It commenced operations by lending fl. 8,000,000 to the colonial government, receiving the consignment of the produce sent to Europe, and exporting European wares to supply the Indian market; and in course of time their advances amounted to fl. 30,000,000. By an arrangement in 1840, the state became bound, 1*st*, to pay them fl. 5,000,000 annually for 9 years, by which the debt, with 5 per cent. interest, would be paid off; and, 2*d*, to consign all colonial produce raised or bought on government account to their care, for shipment and sale, allowing for this a commission of 4 per cent.: but both these rates of interest and commission have been since reduced.

The government officers deliver the wares to the factory of the company at Java, which contracts to convey them to Europe for a fixed sum. Only Netherlands or colonial shipping can be employed; and their sailing must be so arranged that $\frac{21}{40}$ fall to the share of Amsterdam, $\frac{16}{40}$ to Rotterdam, $\frac{2}{40}$ to Dordrecht, and $\frac{1}{40}$ to Middleburg. In 1840, the shipping freighted amounted to 138,000 tons.

The council of management consists of a president, nominated by the king, 12 commissaries, elected by the shareholders, and 3 paid directors.

The Maatschappij was not at first successful, but it is said to have become so since 1830.

A Treaty of Commerce and Navigation between the Netherlands and Britain, dated October 27, 1837, reciprocally places the subjects of the two powers, in respect to duties, on the footing "of the most favoured nation." It also, "in respect of voyages between the two countries," places their ships as to port-duties, drawbacks, &c., reciprocally on the footing of national vessels. This treaty, which is for the term of 10 years, and 12 months after notice, likewise contains various provisions as to the valuation and warehousing of merchandise, and in regard to wrecks.—See Hertalet's Treaties, vol. v. p. 338.

Provision for the intercourse between the subjects of the two powers in the East was made by a treaty, dated March 17, 1824.

Art. 1. Their Eastern subjects to be admitted to trade with their respective possessions upon the footing of the most favoured nation.

2. "The subjects and vessels of one nation shall not pay upon importation or exportation, at the ports of the other in the Eastern Seas, any duty at a rate beyond the double of that at which the subjects and vessels of the nation to which the port belongs are charged. The duties paid on exports or imports at a British port on the continent of India or in Ceylon, on Dutch bottoms, shall be arranged so as in no case to be charged at more than double the amount of the duties paid by British subjects and on British bottoms. In regard to any article upon which no duty is imposed, when imported or exported by the subjects, or on the vessels of the nation to which the port belongs, the duty charged upon the subjects or vessels of the other shall in no case exceed 6 per cent."

3. The parties engage that no treaty shall be made by either with any native power, which shall, by unequal duties or otherwise, tend to exclude the trade of the others. Intimation to be mutually made of treaties with native powers in the Eastern Seas.

4. The two powers engage to order their officers "to respect the freedom of trade established by art. 1, 2, and 3; and in no case to impede a free communication of the natives in the Eastern Archipelago with the ports of the two governments respectively, or of the subjects of the two governments with the ports belonging to native powers."

The Molucca Islands are excepted from art. 1, 2, 3, and 4, during the existence of the spice monopoly; and the treaty, besides, contains several provisions exclusively of a political nature, for which see Hertalet, vol. iii. p. 284.

This treaty is said to have been since violated by the Dutch colonial authorities; and various remonstrances on the subject have been made by our ambassador at the Hague; but they are of a nature too voluminous to be here noticed.

Finances.—The budget for the year 1842 estimates the receipts at fl. 71,353,551 (£5,946,129), and the expenditure at fl. 71,338,103, including fl. 33,481,341 on account of the public debt. But the brief abstract from which these figures are taken does not show whether the ways and means are confined to the produce of Netherlands taxes, or include besides new loans or anticipated receipts from the colonies. The mode of preparing the Dutch budgets has of late years been the subject of complaint.

The capital of the debt consists of fl. 768,858,300 of old 2½ per cents, and of fl. 382,657,850 of new debt, bearing interest at 3½, 4, 4½, and 5 per cent.; making together, fl. 1,151,516,150. Deducting from which, fl. 200,000,000, the capital of the old debt corresponding to fl. 5,000,000, the interest stipulated to be annually paid by Belgium Treaty, April 19, 1839, art. 13), leaves the debt of Holland fl. 951,516,150 (£79,293,012); the present annual charge on which, including the sinking fund, is fl. 33,994,250. This is exclusive of fl. 236,000,000 (£19,666,666) contracted in 1836, 1837, and 1838, on the credit of the colonial revenues, the interest on which, at 4 and 5 per cent., is guaranteed by the state; also of the fl. 45,000,000, stated above as due to the Maatschappij.

A portion of the Dutch 2½ per cents is issued in certificates of fl. 1200, or £100 each, the dividends on which, due January 1 and July 1, are payable at Messrs Rothschild's, London, at the fixed rate of fl. 12 per £1. The dividends on a portion of the colonial 5 per cent. loan of 1837 are also payable in London, at Messrs Salomon's, at the same rate, the net amount of the half-yearly coupon on each fl. 1000 bond being fl. 24·75, the value in sterling is £2, 1s. 3d.: these last are payable in Holland on 1st April and 1st October.

NETS, FISHING, are rarely a subject of commerce, being almost all manufactured by the fishermen and their families.

NEW BRUNSWICK, a province of British America, lies between lat. 45° and 48° 5′ N., and long. 63° 48′ and 67° 53′ W.; and is bounded N. by Canada and Chaleur Bay; E. by Gulf of St Lawrence, Northumberland Strait, and the Isthmus of Chignecto, which separates it from Nova Scotia; S. by the Bay of Fundy; and W. by Maine and Canada. Area, 26,000 sq. miles. Population in 1834, 119,557, chiefly of British origin. The administration is vested in a lieutenant-governor (subordinate to the governor-general of British America), executive and legislative councils, and a house of assembly of 28 members.

The country, though mountainous towards the north, is mostly composed of bold undulations, sometimes swelling into hills, and again subdividing into vale and lowlands, covered with magnificent forests, and intersected by the river St John (the great feature of the province), and numerous other streams, which afford water-communications in every direction to the pleasing settlements scattered throughout the fertile alluvial spots termed *intervales*. The climate, similar to that of Canada, is highly salubrious; but agriculture, though recently improved, is in a very backward condition. The most important article of produce is the potato; the cereal grains are not raised in sufficient quantity for the consumption; and indeed the greater part of the country is still in a state of nature. Gypsum abounds; and mines of coal, iron, copper, and manganese are worked, but only to a trifling extent.

The commercial wealth of New Brunswick is as yet therefore limited to its forests, especially those of yellow pine; and under the influence of the discriminating duties in Britain in favour of colonial produce, the industry of the inhabitants is chiefly devoted to the timber trade. This trade is conducted by "lumberers," who penetrate the forests at the close of autumn, and during the winter cut down the trees, which are floated down the rivers by the "freshets," or melted snows, about the end of April. A considerable portion of the wood is formed into deal, battens, and shingles; for which purpose there were, on 1st January 1836, 320 saw-mills in the colony, valued at £420,000; but the greater portion is shipped in the log. The chief other branches of industry are the fisheries and shipbuilding. The vessels built are considered by many to be too slight: they are called slop or cabbage-stalk built, having their lower timbers of pine or spruce: their construction, however, costing little more than £6 a-ton, is carried on to a considerable extent, amounting, in 1839, to 164 vessels, with a tonnage of 45,864.

New Brunswick being, from its position, not adapted for a depôt, its commerce consists mainly of the exchange of its own surplus produce for articles of consumption. In 1833, 1835, and 1837, the value of the exports (exclusive of new ships) was respectively £469,464, £577,211, and £588,397; the last including £476,670 for wood and lumber, £34,677 for train oil, and £30,550 for fish, chiefly dry cod; the whole mostly shipped to Britain and the West Indies. The amount of imports in the same three years was respectively £549,215, £621,500, and £730,563; the last including £150,828 for corn and flour, chiefly from the United States and Germany; the remaining imports consist principally of manufactures, metals, coal, salt, tea, and other articles from Britain, and of West India produce. The above sums, it has to be observed, do not include the transactions with the adjoining colonies.

Ports.—Fredericton, the seat of government, pop. 3000, lies on the St John, 85 miles from its mouth, and, being accessible to sloops of 50 tons, carries on a considerable trade. The town of St John, situated near the mouth of the river, is, however, the commercial capital of the province; pop. 10,000. The chief other ports are, St Andrews, at the mouth of the St Croix; Miramichi, Chatham, and Newcastle, in Miramichi Bay; and Dalhousie, in the Bay of Chaleur. St John, St Andrews, and Miramichi are free ports; the two first being also warehousing ports. In 1839, 3527 vessels entered outwards, possessing a tonnage of 444,051; whereof Britain, 290,925 tons; British colonies, 118,800 tons; United States, 33,688 tons; foreign states, 638 tons.

The currency and mode of keeping accounts are the same as in NOVA SCOTIA; and the premium for bills on England fluctuates from about 8 to 18 per cent. The average amount of paper in circulation in 1838-39 was £350,000, consisting of the notes of five local banks and the Bank of British America, and of notes issued by the Corporation of St John.

The public revenue, amounting annually to about £60,000, is chiefly derived from import duties. The provincial duties are trifling; on British manufactures 2½ per cent. is levied, excepting, however, articles required in shipbuilding, machinery, refined sugar, provisions, and books. The crown duties (levied only on foreign goods) are detailed under the head COLONY.

NEWFOUNDLAND, an island and British colony lying in the Atlantic Ocean, E. from the Gulf of St Lawrence. Area, 57,000 sq. miles. Population in 1835, 73,705, mostly of Irish or Scotch origin. The administration is vested in a governor, with executive and legislative councils, and a house of assembly of 15 members.

The island is triangular in form, and the shores are rugged and indented. Little is known of the interior, except that it is in some parts hilly, is intersected by numerous lakes and streams, and that the soil is in general rocky and barren, and produces little good timber. The climate is humid, and in winter intensely cold. The importance of Newfoundland is derived solely from the fisheries upon its coasts, and those of the contiguous parts of Labrador, and upon the submarine banks which lie to the S. E.; and the settlements, which amount to 60 or 70, are confined to the shores; the greater part being on the eastern and southern, particularly the former. The principal town and port is St John, situated on the peninsula at the extremity of Avalon, in lat. 47° 33′ N. long., 52° 44′ W.; population from about 10,000 to 15,000, according to the season. Harbour-Grace, near St John, is the chief other trading place: both are free warehousing ports.

The fishery has been already described under the head Cod. The quantities procured and dried in the years 1837, 1838, and 1839, were, respectively, 848,096, 724,515, and 865,377 quintals, each of 112 lbs.; the chief other articles of produce in 1839 were seal and cod oil and blubber, 2,244,262 gallons; 437,501 seal skins; 20,806 barrels herrings; and 2922 tierces salmon. The value of the exports amount annually from about £800,000 to £850,000. The agricultural produce being limited to small quantities of potatoes, oats, and hay, the island is almost entirely dependent upon supplies from other countries: Corn and flour are imported from the United States, Germany, &c.; and beef, bread, biscuit, butter, and other provisions, from Ireland and Hamburg. The remaining imports consist chiefly of manufactures, fishing-tackle, cordage, and apparel from Britain; rum, molasses, and sugar, from the W. Indies; and salt from Britain, Portugal, and Spain. The shipping which entered inwards in 1839, amounted to 861 vessels, 91,661 tons: whereof Britain, 19,390 tons; British colonies, 28,064 tons; United States, 5207 tons; and foreign, 39,000 tons.

The Currency and mode of keeping accounts are similar to those of Nova Scotia. The circulating medium is composed of dollars, British coins, and of notes issued by the bank of British America, which has a branch at St John. For other regulations see the article Colony.

Labrador, a dependency of Newfoundland, from which it is separated by the Straits of Belleisle, is a wild and steril region between Hudson's Bay and the Atlantic. Its prevailing features are rocks, swamps, and mountains covered with forests. Its shores, inhabited chiefly by Esquimaux, are much resorted to in the prosecution of the cod fishery, especially the S. E. tract.

NEW GRANADA, one of the three Colombian republics, occupies the most northern portion of S. America, including part of the Isthmus of Darien: it lies between lat. 1° S. and 12° N., and between long. 68° and 83° W.; and is bounded N. by the Caribbean Sea; E. by Venezuela; S. by Ecuador; and W. by the Pacific and Central America. Area, about 380,000 sq. miles. Population in 1836, 1,686,038, partly of Spanish origin, but chiefly Indians, negroes, and mixed races. Departments, Isthmo, Magdalena, Boyaca, Cundinamarca, and Cauca, which are subdivided into 20 provinces. Capital, Bogota, an inland city, pop. 40,000. The legislative power is vested in a congress, consisting of a senate and house of representatives; the executive in a president and vice-president, as in the United States.

New Granada, like the other American states situated within the tropics and penetrated by the Andes, is characterised by great diversities of soil and climate, and consequently of productions. The European cerealia, potatoes, and the aracacha root, are objects of culture on the tableland of Bogota, and in the districts along the western declivity of the Eastern Andes. In the vales of the Magdalena, Cauca, and other great rivers, as well as on the low plains along the coast, maize and plantains are reared as food; while cotton (called in trade Carthagena cotton), cacao, tobacco, and a little sugar, are cultivated as articles of commerce. Timber abounds, and many drugs and dye-woods. Brasiletto and fustic are obtained from the forests which enclose the Sierra de Santa Martha. Ipecacuanha is collected on the banks of the Magdalena; and cinchona on the Andes of Merida and other places. The balsam of Tolu is procured on the banks of the Rio Sinu. The plains of Casanare feed large herds of cattle, which supply abundance of jerked beef and hides.

The country, however, is chiefly distinguished for its minerals, which mostly occur on the western declivity of the chains of the Andes. They consist of gold, silver, platina, mercury, copper, lead, iron, and rock-salt. By far the most important is gold, which is more abundant here than in any other country of America. The greater part is obtained by washing auriferous soils in the province of Choca. At the beginning of the present century, the annual produce of gold was estimated by Humboldt at 20,505 marks, value, £620,000; but the troubles consequent on the separation from the dominion of Spain, and the smuggling produced by injudicious commercial regulations and government monopolies, render it difficult to state the extent to which this or the other productions of the country are at present available.

New Granada labours under many disadvantages as to trade; the coast districts being marshy and unhealthy; while the inland and healthy regions are so situated that no one can communicate with any of the ports without very great expense, except the valley of the Upper Magdalena, the produce of which is sent down that river to Santa Martha and Carthagena. This is more especially the case with the valley of the Upper Cauca, the most fertile tract of the republic, which is every where surrounded by high mountains; its produce is mostly sent to Buenaventura, over the Western Andes, some parts of which are so steep that the merchandise has to be carried by men. The produce of the most populous district, the mountainous country of Boyaca, is sent by the river Zulia to the Venezuelian harbours of Maracaybo. In 1835, the total value of the exports was $2,566,208; and of the imports, $3,292,625.

Ports on the Atlantic side, Rio Hacha, Santa Martha, Savinalla, Carthagena, and Portobello; on the Pacific side, Chagres, Panama, Choco, and Buenaventura.

Carthagena, formerly considered the great bulwark of Spanish America, is a strongly fortified and handsome city, and the chief naval arsenal of the republic; it lies on a sandy peninsula in the Caribbean Sea, in lat. 10° 25′ N., long. 75° 34′ W. Pop. 18,000. The port, one of the best and most capacious on the N. coast of S. America, is that whence the packets sail between Colombia and the United States and Europe. In 1837, the exports amounted to $1,799,094, or £359,819; whereof, £340,297 consisted of bullion, mostly gold, shipped in Queen's ships to England.

Santa Martha, about 100 miles N. E. from Carthagena, pop. 8000, has a good harbour and a considerable trade: it exports dye-woods, and is the channel through which British manufactures and other goods are forwarded to the Rio Magdalena. In the year ending May 31, 1838, the exports amounted to $231,156; and the imports, mostly from Britain, France, and the United States, to $1,209,878; the shipping entered in the same year amounted to 12,196 tons.

The Measures and Weights are the same as those of Spain. The integer of account is the piastre or dollar, divided into 8 reals. At Carthagena and other places prices and exchanges are quoted in ordinary dollars, commonly at the rate of $5 per £1. The Colombian, or "Macuquina dollar," however, is different; its usual rate of exchange being $6¼ or $6 per £1.

The public Revenue in the year to August 31, 1835, amounted to $2,337,836, mostly from customs, the tobacco monopoly, and sales of land: the expenditure was nearly of the same amount, but it did not embrace any payments on account of the interest on the foreign debt, explained under Colombia, to which, in 1837, the congress agreed to appropriate one-eighth of the import duties, and one-half of the surplus revenues from 1st October 1836, as well as the net proceeds of the tobacco monopoly: various items were at same time set aside for the redemption of the capital.

NEW SOUTH WALES, a British colony, occupying the S. E. part of the continent of Australia; the settled portions chiefly embracing the district within 200 miles of the E. coast between Port Macquarrie, in lat. 31° 27′ S., and the Murroo River, in lat. 36° S.; and the Port Phillip district on the S. coast. Population in March 1841: males, 85,168; females, 43,558; total, 128,726; whereof 26,976 were transported convicts,—the colony having been originally founded (1788) as a penal settlement. The administration of public affairs is vested in a governor; an executive council appointed by the crown; and a legislative assembly, consisting of 12 members nominated by the crown, and 18 elected by the colonists. The crown originates money-votes; and the colonial revenues are permanently charged with £51,000 of salaries to judges and public officers, and £30,000 for public worship.

The principal geographical feature of the east coast district is a range of mountains, which, S. of the parallel of 33°, where it is called the Blue Mountains, runs nearly N. and S., at an average distance of 40 or 50 miles from the shore; but at that latitude it declines to the W. until 32°, where its distance from the sea is 140 miles. It then turns suddenly to the E., and, under the name of the "Liverpool Range," continues in this direction for about 50 miles, till it again resumes its former course, at a distance of 80 or 100 miles from the shore. This mountainous ridge divides the Murroo, Clyde, Shoalhaven, Hawkesbury, Hunter, Manning, Hastings, and other streams, which intersect the E. coast, from the Darling, Macquarrie, Lachlan, and Morrumbidgee, which, rising on its western side, flow for a considerable distance into the interior, until, taking a southerly course, they unite in the Murray, and fall into the shallow lake Alexandrina, contiguous to Encounter Bay.

The country between the dividing range and the sea is undulating or hilly: the flats, mostly along the shore, are generally of small breadth, though in some places they extend nearly to the dividing range itself. These flats are almost free of timber, and have commonly a poor sandy soil, though abounding with herbage for cattle; but the hilly districts, which, in a few places, as at Newcastle and Port Macquarrie, descend to the coast, are generally better,—the valleys having commonly a strong soil, covered, in its natural state, with a vigorous vegetation, and yielding, when cultivated, good crops of corn. The interior, or western declivities of the Blue Mountain and Liverpool ranges, consist of a series of terraces, having a rich dry soil, admirably adapted for sheep pasture, especially in the districts called Bathurst Plains, Liverpool Plains, and Yass Plains. Beyond the meridian of 148°, these terraces descend to a very low level country, which, as far as explored, is monotonous, deficient in vegetable matter, and, to a considerable extent, flooded during the rainy season.

The rivers afford few or no facilities for inland navigation; those on the coast side of the mountain-range being generally of small size; while those running into the interior, receiving few affluents, shoal and narrow as they proceed, until by absorption and evaporation they are sometimes almost wholly dried up. But numerous carriage roads have been constructed by the convicts; these are principally in the coast districts, though one is now made in the direction of Bathurst, across the Blue Mountains, formerly deemed impassable in this way.

The Port Phillip district, the Australia Felix of Major Mitchell, by whom it was first explored in 1836, lies on the S. coast, nearly opposite to Van Diemen's Land. It is separated from the east coast district just described by the lofty Warragongs or Australian Alps, and an extensive unoccupied territory. Being less arid and more fertile than the other part of the colony, it has, since its capabilities were made known, been the favourite resort of emigrants; and its advance in prosperity has amply justified the discoverer's self-congratulation of "being the harbinger of mighty changes,"—there being already many thousand acres under crop, besides a great extent of territory located as pasture.

The climate, eminently salubrious, resembles that of Italy, but is drier; the extremes of temperature are also greater, the average heat less, and decreases more rapidly by elevation. The seasons are the reverse of those of Britain,—January being the warmest month, and July the coldest; but frost is rare, and snow never lies in the valleys. The rains mostly occur on the E. coast in May, and in the interior in summer. On the former Fahrenheit ranges in summer between 36° and 106°, —its mean being 70°; in winter, between 27° and 98°,—its mean being 66°. The most unfavourable characteristic is the fearful droughts which periodically occur; these are succeeded by excessive rains, which decrease yearly until they again cease; the cycle embracing 10 or 12 years. These visitations will, however, be probably modified as cultivation is extended.

The vegetable productions are as yet unimportant. The timber, generally of the hard wood kind, is not very valuable; and the trees are rarely so numerous as to impede horse-travelling. The finer fruits, however, have been introduced; and, in 1840, about 3500 gallons of good wine were made by some German settlers; the olive also thrives. Almost every kind of corn is cultivated; but owing to the preference given to sheep-husbandry, the supply is insufficient for the consumption. In 1838, the land under crop amounted only to 92,912 acres; whereof 48,060 were in wheat; 25,043 in maize; 2922 in barley; 3767 in oats; and 9939 in sown grasses: the remainder was occupied with trifling quantities of rye, tobacco, potatoes, and millet.

The sheep-farming of New South Wales dates from 1797, when Captain Macarthur, observing the favourable influence of the soil and climate on the fleeces of ordinary stock, procured from the Cape a few of the Merino kind, whose breed he continued pure, though the settlers generally gave a preference to animals of heavier carcass, from their returning a more immediate profit, until 1821 or 1822; after which the Merinoes became the principal subject of attention, and their wool the great staple of the colony. In 1807, the quantity shipped was only 245 lbs.; and, in 1820, not above 99,415 lbs.; it then rose, in 1825, to 411,600 lbs.; in 1830, to 899,750 lbs.; in 1835, to 3,776,191 lbs.; and in 1840 (including 929,325 lbs. from Port Phillip), to 7,668,960 lbs.! This rapid progression is, in a great degree, attributable to—what to many seemed the bane of the colony—the transportation thither of convicts, of whom upwards of 80,000 were sent prior to 1840. The greater number being assigned to settlers, and proving (under the colonial discipline) efficient servants, placed this young and remote settlement in a position as to labour which it could not otherwise have attained. In August 1840, farther transportation was stopped, owing to the difficulty which began to be felt in combining convict with free labour, and other circumstances affecting the moral interests of the colony. This change has produced some embarrassment; but the tide of voluntary immigration has now, it is believed, set in too strongly to render its unfavourable influence other than temporary. In the 10 years ending 1838, only 23,185 free immigrants arrived. In 1840, however, no fewer than 14,392 left the United Kingdom for Australia, including 7648 to Sydney; and, in 1841, 28,724, including 17,492 to Sydney, and 9894 to Port Phillip. This increase has been mainly owing to the allowance of bounties to labourers out of the land sales.

The branch of industry next in importance is the South Sea whale-fishery, in which the colonists have a considerable amount of shipping employed; yielding of exportable produce, in 1840, 1854 tuns sperm, and 4298 tuns black whale oil, besides 250 tons whalebone.

Manufactures, except a few distilleries, breweries, candle and soap works, can scarcely be said to exist. Minerals, however, abound, especially iron and coal; and mines of the latter are worked at Newcastle on Hunter's River.

The principal commercial relations are with Britain, to which (excepting trifling quantities of wool and oil to the United States) the whole produce of the colony is sent, and by which it is supplied with every kind of manufactured goods. The declared value of British manufactures and produce sent to all the Australian settlements, though only £314,677 in 1830, amounted in 1838 to £1,336,662; in 1839 to £1,679,390; and in 1840 to £2,004,385. A variety of foreign and tropical articles are besides sent, including in 1840 460,753 galls. rum; 428,666 galls. brandy; 184,151 galls. geneva; 750,322 galls. wine, mostly sherry and port; and 847,988 lbs. tobacco and snuff. The great bulk of these were destined to New South Wales; to which the chief other imports are—sugar from Mauritius; corn from Van Diemen's Land and Chili; rice from India, Java, and United States; coffee from Java; tea from China; and wine from the Cape. These countries, receiving few articles from the colony in return, a considerable balance has occasionally to be remitted to them in specie.

The imports into New South Wales alone (including Port Phillip), in 1838, 1839, and 1840, were valued there at £1,383,759, £1,788,381, and £2,462,858 respectively: the last made up of—liquors (including 2,260,774 galls. spirits!), £338,494; clothing, bedding, &c., £787,958; sugar, teas, corn, and other edibles, £502,149; tobacco, salt, soap, candles, &c., £198,022; furniture, carriages, and other articles for personal or domestic use, £122,249; hardware, metals, leather, bagging, and other articles in use for agriculture, manufactures, and trade, £450,996; books, printing materials, &c., £50,032; forage, £6,551; coin, £6,407. The exports, besides wool and oil, consist of timber, chiefly cedar and blue gum, and the reshipment of imported commodities to New Zealand and other places. Their amount is always considerably below that of the imports, the difference being in general made up by government expenditure, and the investment of British capital by new settlers and otherwise. In 1840, however, the excess of imports was forced to an unnatural extent by over-exports from the mother-country; a circumstance which, joined to a vicious credit-system, and financial excitement in the colony, was productive of great embarrassment.

PORTS.—*Sydney*, the seat of government and chief commercial emporium, lies on the E. coast, in lat. 33° 51′ S., long. 151° 14′ E., on the S. side of the magnificent inlet called Port Jackson, 7 miles from its mouth. Population in 1841, 29,973. It is a free warehousing port. The town is situated partly in a narrow valley, and partly on a slope rising from the shore; and its tastefully laid out shops, well-constructed houses, and numerous government, educational, religious, and commercial establishments, indicate a stirring and flourishing community. It occupies a considerable space, many of the houses having gardens; but nearly two-thirds of its circuit are environed by the coves of Port Jackson. This inlet affords excellent anchorage and protection to shipping, and is so deep, that at Sydney the vessels come close up to the wharfs; it is also navigable to Paramatta, 15 miles above. The exports in 1840 amounted to £1,251,544; whereof wool, timber, &c., £562,172; oil and whalebone, £265,920; and goods re-exported, £423,452.

Melbourne, on the S. coast, in lat. 37° 49′ S., long. 145° E., is beautifully situated at the falls of the river Yarra Yarra, a few miles from the bay of Port Phillip. Ships of 200 tons can be discharged at the town, while the largest vessels have secure anchorage and shelter in the roadstead. It is fast rising to great commercial importance, being the outlet of the range of fertile country extending from the seacoast to the Murray, and also favourably situated for intercourse with the other ports of Australia. The exports amounted, in 1840, to £154,650; and, in 1841 (including 1,897,071 lbs. wool), to £139,100. The imports, in 1841, amounted to £335,052; and the shipping entering inwards to 52,500 tons. It is a free warehousing port.

Measures, Money, Banks, Duties, &c.

Measures and Weights, same as Britain.

Money.—Accounts are kept in sterling; and the coins are almost wholly British, chiefly silver, which, with bank-notes for £1 and upwards (convertible into specie on demand), compose the ordinary currency; though business is mostly transacted by means of bank-cheques; the mass of pecuniary transactions centring in Sydney.

Bills on London are commonly drawn at 30 or 60 days' sight; and the course of exchange varies usually from about 5 per cent. premium to 5 per cent. discount. Few if any bills are negotiated on foreign countries.

Banks.—Bank of Australia, founded 1826; Bank of New South Wales, 1827; Commercial Bank, 1834; Union Bank; Sydney Banking Company, and Bank of Australasia. The last, a chartered body, has its head-office in London; the others are colonial joint-stock companies. On March 31, 1841, their aggregate circulation amounted to £222,802; specie, £342,130; and bills and securities held, £2,615,299!

The interest generally allowed by the banks on current accounts is 4 per cent., and discounts are charged at 10 per cent. per annum. The legal rate is 8 per cent.; but 10 to 12½ per cent. is the ordinary rate demanded by individuals; and much higher is frequently given.

Besides banks, there are in Sydney insurance, gas, and a variety of other joint-stock companies.

Duties on spirits distilled from Australian grain, 3s. per gallon; on British or colonial spirits imported from United Kingdom, 7s. 9¼d. per gallon; all other spirits, 9s. 2¾d. per gallon. On tobacco, manufactured, 2s. 6d. per lb.; unmanufactured, 1s. 6d. per lb. British manufactures, free. Foreign goods, 5 per cent. *ad valorem.* Articles, the produce of British India, same as similar articles of United Kingdom or colonies.

Revenue.—In 1840, the ordinary revenue was £311,748; whereof £252,000 taxes; £16,000 rents and dues; £17,800 office-fees; £14,000 post office: the crown revenues, from land-sales, quit-rents, licenses, &c., amounted to £332,737: total, £644,485.

The land fund in 1840 (including £4,522 for emigration ship-stores) amounted to £320,967; charges thereon, £189,378; whereof, £26,347 for surveys and sales; £14,716 to aborigines; and £148,315 for immigration: Leaving unapplied, £131,589. In the year to 30th June 1841, the sales amounted at Sydney to £67,657, and at Port Phillip to £182,762; total, £250,419: charges, £34,830; surplus, £215,589. The public land-sales are now (1842) made by auction, at a *minimum* price never less than 12s. per acre, instead of the fixed rate of £1 as formerly.

NEWSPAPERS, unless the Roman "Acta Diurna" can be so called, originated in Venice in 1563, when the "Gazetta" first appeared in a written form. The first printed sheet of intelligence is commonly said to have been the "English Mercurie," published in 1588, while the Spanish Armada was in the Channel; but the authenticity of the copies of this paper in the British Museum is doubted; while these (if genuine), as well as the later "Packets of News," were only issued occasionally. Of regular prints, the earliest was probably Butler's "News of the Present Week," in 1622; about which time, likewise, newspapers began to be published on the Continent. During the Great Rebellion, many were spread abroad by the different parties, some interesting notices of which will be found in Mr D'Israeli's "Curiosities of Literature." In 1663, after the Restoration, Roger L'Estrange brought out, "with privilege," his "Intelligencer;" and two years afterwards, the "Gazette" was issued. In Scotland, the first newspaper *published* was "A Diurnal of some Passages and Affairs," originally printed in London, and reprinted at Leith in 1652; but the first *written and printed* was the "Mercurius Caledonius," at Edinburgh, December 31, 1660. In Dublin, the earliest was "Pue's Occurrences," about 1700. The first provincial paper was the "Norwich Postman," 1706, for a penny, but "a halfpenny not refused." Hitherto, the newspapers, though small in size, were generally, in a dearth of news, left in part empty. On such occasions, however, one publisher had recourse to the expedient of filling up with a sufficient portion of the Bible; others,—as the "Flying Post" and "Dawker's News Letter,"—were printed upon writing paper, so that the purchaser might use the blank space for correspondence with his country friends. The first London daily paper was the "Daily Courant," 1709. After this, newspapers became more common; but with the exception, perhaps, of Wilkes' scurrilous "North Briton," 1762, and the "Englishman," in which Burke wrote several articles in 1766, they excited comparatively little interest until after 1771, when the Parliamentary Debates were regularly published. The "Letters of Junius," in the "Public Advertiser" (1769-1772), taught newspaper writers to come out boldly, and accustom their readers to "the roll of the leading article."

The newspaper has since become, in this and all free countries, the established medium for the concentration and expression of public opinion; while, by the division of labour, mental as well as physical, assisted by powerful machinery, it is now fitted to satisfy public curiosity, down to the very hour of printing, on all the passing business of life. Of late years this rapidity has been followed up in Britain in every stage of its circulation, through the agencies of the steam-engine and the railroad, so that every pulsation in the heart of the kingdom is felt, with almost electrical celerity, in its remote extremities. Of the commercial importance of newspapers, it is almost unnecessary to speak. The very appearance of our journals, and more especially of those published at the great seaports, with their crowded columns of advertisements,—their announcements of ships departing and arriving from all parts of the world, as well as of all wrecks and casualties at sea,—their elaborate price currents,—and their almost interminable notices of home and foreign markets, stocks, funds, and exchanges, convey to the mind a far more forcible impression of the utility and value of these vehicles of intelligence to the merchant, than can be imparted by any language.

The number of newspapers in 1782 was 61, of which 50 were in England, 8 in Scotland, and 3 in Ireland. In 1790, the total number was 114; in 1821, 216; and, in 1832, 369. In 1840, the number was 554; of which 137 were printed in London, 247 English provincial, 73 Scottish, and 97 Irish; the total number of stamps issued being 59,774,037, of which 31,405,243 were issued in London. In 1836, the total number of stamps issued was 35,576,056, which, though 40 per cent. below the year 1840, was nearly double the amount at the commencement of the century.

In 1712, as a remedy against "seditious papers and factious rumours," Queen Anne's government imposed upon newspapers a stamp-duty of a halfpenny, afterwards gradually increased to 4d. (with a discount of 20 per cent.); at which rate it continued until 15th September 1836, when it was reduced to 1d. by the act 6 & 7 Wm. IV. c. 76.

ABRIDGMENT OF THE ACT 6 & 7 WM. IV. c. 76.

§ 1. Rates of duty: For every newspaper 1d., and where one side, exclusive of the margin, contains a superficies exceeding 1530 inches, and not exceeding 2295 inches, ½d. additional; but if exceeding 2295 inches, 1d. additional. A supplement not exceeding 765 inches, to a paper charged with duty, is chargeable with ½d. Under the head of newspapers are included,—*1st*, Papers containing public news, intelligence, or occurrences, printed to be dispersed and made public. *2d*, Papers containing only or principally advertisements, printed at intervals not exceeding 26 days. *3d*, Any paper containing public news, or remarks thereon, published periodically, or in parts, at intervals not exceeding 26 days, where any of the numbers does not exceed two sheets (a sheet for the purposes of the act being a piece of paper not less than 21 by 17 inches), exclusive of cover, &c., or is published for less than 6d. exclusive of the duty. Exemptions are, "Police Gazette, or Hue and Cry;" daily accounts, or bills of goods imported and exported, or warrants or certificates for the delivery of goods; weekly bills of mortality; lists of prices current; states of the market; accounts of the arrival, sailing, &c., of merchant vessels, "or any other matter wholly of a commercial nature." The duties commence on 15th September 1836. Other laws for enforcing stamps to be applied so far as consistent with this act.

§ 2. Discount of 25 per cent. allowed on newspaper stamps in Ireland.

§ 3. Dies with name or part name of paper to be prepared, and (when required) altered, at expense of proprietor of each paper; and any other description of stamp to be of no avail.

§ 5. Supplements must be of the same date with papers, and have the word "Supplement to" prefixed to the title of the paper, and the newspaper must show in conspicuous characters that a supplement is published with it, under penalty of £20. Selling supplement apart from paper incurs similar penalty.

§ 6. Before publishing, declaration to be given in to Stamp Office, stating title, place of printing and of publishing, with name and address of printer, publisher, and every proprietor out of the kingdom; or of every proprietor in the kingdom if they do not exceed two, exclusive of printer and publisher; if more than two, of any two whose individual shares are not less than any other proprietor's residing in the kingdom, exclusive of the printer and publisher, the amount of the share of each being stated. The declaration to be signed by the printer or publisher, and by those proprietors named in it who are within the kingdom. New declaration to be made on any change which renders the original one inapplicable, and whenever a new declaration is required by notice from the Stamp Office. Person making false declaration to be held guilty of misdemeanor. (7.) Person failing to give declaration to forfeit £50 for each publication, and to be denied stamps. (8.) Declaration to be filed, and be conclusive evidence of the connexion of each person signing it with the newspaper, unless he have given in declaration to Stamp Office of his ceasing to be proprietor, &c., or a new declaration has been given in as above, and not concurred in by him. Certified copy of declaration can be obtained for 1s., and where such certificate produced along with newspaper, not necessary to prove purchase of newspaper. Unqualified person granting certificate, or proper officer granting one falsely, to forfeit £100.

§ 9. Service of process at the place of printing or publishing mentioned in declaration, to be sufficient against the individuals mentioned.

§ 10. Titles and names of printers and publishers to be entered in a book, and kept at head-office for inspection without fee.

§ 11. Printer, publisher, and proprietors (one or more at discretion of Commissioners), and two approved sureties, to give bond for advertisement-duty, renewable on alterations, and at direction of Commissioners, on penalty of £100 for each publication.

§ 12. Affidavit and bond given in previous to commencement of act, to have same effect as declaration and bond by the act, except where such alterations take place as would require new declaration.

§ 13. Publisher in London, Edinburgh, or Dublin district to deliver copy of each edition to Stamp Office between 10 and 3 on day of publication or following day not a holiday, with his name and address written by himself or a person appointed and intimated to the Stamp Office. The same to be done in other districts within three days, *two* copies being delivered. Penalty on failure, £20. Price of newspaper to be paid weekly by Stamp Office. Newspaper to be kept forthcoming as evidence. On petition, publisher not in the Edinburgh district may be authorized by Commissioners to lodge paper in a more convenient office than that of his district.

§ 14. At end of every newspaper, supplement, or sheet, name and address of printer and publisher, and place and times of printing and publishing, to be stated, under penalty of £20.

§ 15. None to vend stamps but those formally authorized, and publishers not to supply one another, or to purchase from unlicensed persons, under penalty of £50. (16.) Persons publishing without stamp to be liable for stamp-duty as a debt, independently of penalties. (17.) Persons publishing, selling, or possessing unstamped papers, may be summarily fined £20 for each, or, on default, be imprisoned for not more than three or less than one calendar month, by one Justice, on application of officer of stamps. (18.) Penalty of £50 for sending unstamped newspapers abroad. Officers of stamps authorized to seize unstamped papers without warrant.

§ 19. Where any individual prosecutes for libel, discovery of any person or matter connected with the publication of a newspaper may be enforced by process.

§ 20. Advertisement-duty to be paid within 28 days after the last day of each calendar month, and on ten days' farther delay after notice, stamps to be refused.

§ 21. Copy of each work containing advertisements to be lodged in the London, Edinburgh, or Dublin district within six, in others within ten, days of publication, and advertisement-duty paid, under penalty of £20.

§ 22. On information on oath as to transgressions of the act, and application of officer of stamps, Justice may grant warrant to search premises in the daytime, and if unstamped papers found, they, and all presses and types used for printing them, and others in the same premises, to be seized and forfeited. (23.) In execution of warrant, doors may be broken open in the daytime. Persons obstructing forfeit £20. Peace-officer refusing to act forfeits £10.

§ 24. A printer may deliver notice of his name, address, and place of business, and a list of periodicals printed by him, renewed quarterly, and notice of each new periodical at its commencement. (25.) Persons adopting this arrangement not liable for any periodical which would require to be stamped, unless published after notice is received from Stamp Office.

§ 26. Actions under the act to be brought before Court of Exchequer, within three calendar months, and after one month's notice. (27.) Penalties to be pursued for before Court of Exchequer, or before Justices where the penalty does not exceed £20. Commissioners may mitigate or stop proceedings.

§ 28. Justices may convict on evidence without presence of accused, may give warrant for levying penalty and costs by sale, or for incarceration for not more than three or less than one calendar month. Appeal on recognisances and notice lies to next general or quarter sessions.

§ 29-32. Forms of processes and acts repealed.

§ 33. Acts not repealed as to arrears of duties, &c.

§ 34. Where stamps rendered useless by the reduction or change of die, on notice within six months, others substituted to the same amount in value.

Newspapers abound in all the British colonies, even in the youngest, New Zealand; to which, indeed, materials for printing a journal were sent with the first settlers. Several have been established in the West Indies by the coloured population as their special organs, and are supported and conducted entirely by this class; while in India, besides those in English, there are many in the native languages. In the United States nearly 100,000,000 copies are annually circulated: they have no tax, and the postage, when they are not sent above 100 miles, is only a cent (½d.); but their circulation is more essentially local than in Britain, owing to the thinness of the population. In the absolute monarchies of the Continent, the press is fettered by a rigorous censorship, and in several other states it is subjected to a modified superintendence: their newspapers are from this cause, as well as the apathy of the people, comparatively small in number, and less occupied with political subjects. In France, however, the amount of periodical journals in 1837 was 776, of which 326, including 27 daily papers, with an average sale of 90,000 copies, belonged to Paris. This is apparently a great excess over Britain; but to make the comparison complete it would be necessary to keep in view our unstamped periodicals; also, that in point of size and "getting up," the best Parisian journals do not equal our ordinary provincial ones, and sink into insignificance when compared with the giant of Printing-house Square. Again, notwithstanding the best French newspapers are said to excel in the comprehensive, sober, and critical application of general principles to political questions, being less biassed by party spirit—the reproach of the British—and especially of the American press, yet they want that species of power which characterizes our daily prints. Thus, though the "Journalism of Paris" is supposed by those conversant with both countries to exercise a greater influence in France than the London papers do in Britain, still out of France the Parisian journals scarcely affect public opinion at all; while, as was proved by the slave-trade agitation, the influence of the London press is felt over the civilized world. [ADVERTISEMENTS.]

NEW YORK. [UNITED STATES OF NORTH AMERICA.]

NEW ZEALAND. [ZEALAND, NEW.]

NICARAGUA OR PEACH WOOD, an inferior kind of brazilwood, used to dye a bright fugitive "fancy red." About 2500 tons are annually imported from Central and South America.

NICKEL, a brilliant white metal resembling silver; ductile and malleable, and capable of receiving a high polish. Sp. gr. 8·5. It is usually procured from speise, a compound of the metal with arsenic, found associated with cobalt in Germany. Alloyed with copper it forms argentane or German silver; and is besides used in making mariners' compasses and for other purposes.

NIGRITIA, a term applied by modern geographers to the whole of Central and Western Africa inhabited by the Negro race. It extends from the Sahara or Great Desert on the N. to 16° S. lat., the parallel of Cape Negro; thus embracing Senegambia, Soudan, Guinea, Angola, and generally all countries watered by the Senegal, Gambia, Quorra or Niger, Congo, and other rivers flowing into the Atlantic within the above limits, as well as those which run into Lake Tchad. Of the interior of this vast region little is known beyond what is furnished by Park, Denham, Clapperton, Lander, and other travellers. A trade of some consequence is carried on between it and the Barbary States, as well as Egypt, by means of caravans which cross the Desert; but our information regarding this intercourse is scanty, and not very recent. In the present article, therefore, we shall confine our attention principally to the coast-district, where several of the European nations have settlements.

Nigritia, though containing the mountains of Kong and other lofty elevations, may yet be described as upon the whole rather an undulating than hilly region. Being likewise wholly within the tropics, and mostly well watered, it is in general capable of yielding the richest products of the vegetable kingdom. These advantages, however, have been in only a trifling degree improved by agriculture; and, excepting small portions around the towns and villages, the great mass of the country consists of dense forests and jungles, swarming with wild beasts and noxious reptiles. The products of culture are chiefly maize and millet, to which in some places are added rice, yams, coffee, sugar, and cotton; but scarcely any of these have been raised for more than native use. As yet, notwithstanding the exertions of Britain, the traffic in slaves forms the grand staple of the intercourse with foreigners. [SLAVE.] Of the commodities which form the subjects of legitimate commerce, the most important is the oil of the palm tree. [PALM OIL.] The chief others are—gold, found principally in the mountainous districts at the heads of the Senegal and Gambia, and in Upper Guinea, from whence it is carried down these rivers as well as to the Gold Coast; ivory or elephants' teeth drawn also from the interior; gums, particularly gum-senegal, procured from forests in the half-desert tracts north of that river; also teak and various kinds of ornamental and dyewoods, especially that called cam-wood. These articles are exchanged for European goods, —mostly cottons, arms and ammunition, iron and other metals, spirits, and cowries, which last are largely introduced as a medium of circulation.

The principal European settlements,—as the French on the Senegal, the British on the Gambia, and the Portuguese on the Rio Grande,—consist of fortified depôts at the mouths of rivers, from whence the merchants set out in boats at certain seasons, and ascend the streams as far as they are navigable; stopping at fixed stations to which the natives bring their productions to exchange for manufactures. In a few positions there are besides block-houses, wherein some black soldiers with European officers are kept for the protection of trade. Enterprise, however, is checked both by the savage habits of the natives and by the climate, which along the whole coast is highly insalubrious to European constitutions, and on the shores of Guinea is pestilential to a degree quite unknown in any other part of the world.

BRITISH SETTLEMENTS.—*Bathurst*, a fortified town on St Mary's, a low swampy island, commanding the entrance of the Gambia, in lat. 13° 28′ N., long. 16° 35′ W.; pop. 3000. The British likewise possess *Fort James*, 30 miles, and *Macarthy's Island*, 300 miles farther up the same river, besides minor posts. Vessels of 300 tons navigate the Gambia for 60 leagues, and smaller vessels as far as Barraconda, 250 leagues. The exports from these settlements, consisting principally of bees' wax, gum, hides, ivory, mahogany, gold, and palm oil, amounted in the years 1837, 1838, and 1839 (including re-exports of tobacco, &c.), respectively to £138,226, £129,498, and £162,789; the imports to £99,763, £105,625, and £153,903; and the shipping employed in each year amounted to about 15,000 tons.

Sierra Leone, a colony occupying a peninsula about 450 miles S. from the Gambia; area, 393 sq. miles; pop. in 1839, 39,133, of which, however, only 99 were white. Freetown, the seat of government, is in lat. 8° 30′ N., long. 13° 14′ W. All the West India products have been introduced, and generally succeed, especially coffee; but the exports still consist mainly of timber, palm oil, and cam-wood. The chief imports are Manchester and India goods, provisions, tobacco, spirits, arms, and ammunition. In the years 1837, 1838, and 1839, the exports amounted respectively to £108,368, £64,996, and £58,440; and the imports to £79,472, £91,198, and £103,086. The British likewise possess several islands contiguous to this coast.

Cape Coast Castle, on the Gold Coast, in lat. 5° 6′ N., long. 1° 13′ W., may be considered the centre emporium between Sierra Leone and the delta of the Niger, for the introduction of British goods in exchange for gold dust, palm oil, and ivory. The chief other British possession on this coast is *Accra*, where a considerable trade is carried on with the Ashantees.

FRENCH SETTLEMENTS.—*St Louis*, on a sandbank at the mouth of the Senegal, in lat. 16° 0′ N., long. 21° 11′ W.; pop. 15,000, including 800 whites. Its chief advantages are confined to the gum-trade, and the gold-trade with the kingdom of Bambouk, in Upper Senegal; the last being chiefly carried on at *Bambek*, which, with *Podhor*, on the island of Morfil, are the chief other settlements in the river. For navigation the Senegal is far inferior to the Gambia; its ascent, indeed, being only practicable in the wet season from May to October.

Portandic, on the coast, about 140 miles N. from the Senegal, derives its chief if not sole importance from the gum-trade with the adjoining districts.

Considerable excitement has of late years been produced among the British merchants trading to this coast, by their exclusion from Portandic, notwithstanding the right guaranteed to them by art. 11 of the treaty of 1783 (since confirmed by the treaty of Paris), which provides: "As to the gum-trade, the English shall have the right of carrying it on from the mouth of the river St John to the bay and fort of Portandic inclusive: provided that they shall not form any permanent settlement of whatsoever nature in the said river St John, upon the coasts, or in the bay of Portandic." This matter is at present the subject of discussion between the two governments.

Albredar, a factory near Fort James, on the Gambia. This possession is disputed by the British, as being in contravention of the treaty above mentioned.

PORTUGUESE SETTLEMENTS.—*Bissao*, and other posts in the Rio Grande and adjoining coast.

Angola, at the extreme south of Nigritia, has been already noticed. [ANGOLA.]

DUTCH SETTLEMENTS.—*El Mina*, on the Gold Coast, 9 miles W. from Cape Coast Castle; also *Axim*, on this coast, and some minor posts.

Danish Settlements.—*Christianborg Castle*, near Accra, and *Ningpo*, near the E. extremity of the Gold Coast.

American Settlement.—*Liberia*, a small colony founded in 1821, at the mouth of the Mesurado, between Sierra Leone and Cape Palmas, as an asylum for liberated negroes.

Besides the intercourse at these settlements, there is a considerable floating traffic by vessels, which trade along the coast, or enter some of the large rivers, where their cargoes are bartered for produce. This trade, which is of course the only kind carried on in the Gulf of Guinea, between the Gold Coast and Angola, a tract where there are no European settlements, and which includes the fertile and populous countries watered by the embouchures of the Quorra and other large rivers, appears to be nearly as extensive as that conducted at the European settlements. Its great staple is palm oil. According to Messrs Laird and Oldfield, "the best goods for this trade are muskets, powder, red beads, white baft, common scarlet cloth, blue beads, bandanas, romals, coarse stuff hats, pipes, tobacco in leaf, and looking-glasses. A puncheon of oil is termed so many bars, varying according to the state of the market; a gun is six bars; a head of tobacco, two bars; and so on in proportion. Cowries are taken at Eboe, and all up the country." This traffic, however, is subject to frequent interruptions from the slave-trade. "In the Bonny, Calabar, and Cameroon rivers, there are always British ships loading with palm oil and other African produce; their commanders and crews making every exertion to complete their cargoes, and the natives actively engaged in collecting produce:"—"A slave-trader arrives in the river; the trade with the British vessels is instantly stopped; the canoes of the natives are armed and equipped for a marauding expedition to procure the slaves; and until these slaves are procured, no legitimate trade is pursued."—(*Laird and Oldfield's Africa*, vol. ii. p. 357.)

The exports of British produce and manufactures to the west coast of Africa, in the three years 1831, 1835, and 1840, amounted respectively to £234,768, £292,540, and £492,128: the last mainly consisting of cottons, £261,297; arms and ammunition, £104,934; iron, £18,558; hardware and cutlery, £14,090; brass and copper goods, £13,167; apparel, £8673; salt, £6620; besides small quantities of woollens, soap, and candles, hats, silks, glass, earthenware, &c. In the same year (1840), there were also sent from Britain 1,648,874 lbs. tobacco, besides India piece goods, cocoa, coffee, and other tropical products. The chief imports into Britain (exclusive of gold, which is not entered in the customs accounts) in 1840, consisted of 315,458 cwts. palm oil; 12,541 loads teak; 1933 cwts. ivory; 3773 cwts. bees' wax; 3235 cwts. hides; 42,015 lbs. coffee; 49,530 lbs. pepper; and 896 cwts. ginger.

Accounts are kept at the European settlements in the national denominations of money, or in dollars, which, with cowries, form the principal currency along the coast.

NITRATE OF POTASH, or SALTPETRE (Fr. *Nitre*. Ger. *Salpeter*. It. *Nitro*. Sp. & Por. *Nitro, Salitre*. Rus. *Senitra*. Per. *Shorak*. Hind. *Bajee*), a salt composed of nitric acid and potash. It crystallizes in general in six-sided prisms, with striated surfaces, very brittle, has a saline cooling taste. Sp. gr. 1·933. It undergoes no alteration in the air, though it attracts moisture in a saturated atmosphere. On being exposed to heat it fuses, and in this state it is sometimes moulded into little cakes or balls, and called *sal prunella*. Saltpetre is used for making gunpowder, signal-lights, nitric and sulphuric acids; also for preserving meat. It is besides employed in metallurgy, dyeing, and in medicine. The supply of this country is derived almost exclusively from Bengal, where it exists in the soil, and from which the rough nitre or crude saltpetre of commerce is obtained by lixiviation, crystallization, and evaporation: in this state it generally occurs in brownish broken crystals, more or less deliquescent. It is shipped from Calcutta in bags, each containing 164 lbs.; and the trade has greatly increased since the abolition of the Company's monopoly. From 200,000 to 260,000 cwts. are now annually imported into the United Kingdom. In France, Germany, and Spain, saltpetre is produced artificially on what are called nitre beds.

NITRATE OF SODA, or CUBIC NITRE (Fr. *Nitrate de soude*. Ger. *Würfelsalpeter*), consists of nitric acid and soda. It is similar to saltpetre in its properties, differing chiefly in being more pungent in taste, more soluble in cold water, more inclined to attract moisture from the atmosphere, and in crystallizing in a rhomboid form. This salt is found in immense quantities in deposits in South America, particularly in the districts of Atacama and Tarapaca in Peru, near to the frontiers of Chili, where it is found sometimes efflorescent, sometimes crystallized, but oftener confusedly mixed with clay and sand. Of late years it has been imported in considerable quantities into this country, where it is highly esteemed as a manure for pastures, and indeed for almost all sorts of agricultural produce, except that grown upon heavy wet soils. It is also applied to many of the purposes for which nitrate of potash is used, though, being more deliquescent than that salt, it is not adapted for the manufacture of gunpowder. In 1840, 146,928 cwts. were imported into the United Kingdom from Peru and Chili.

NITRIC ACID (Fr. *Acide nitrique*. Ger. *Salpetersaüre*), an intensely acid liquid, procured by distilling nitre with strong sulphuric acid. When pure it is colourless; and when most concentrated it has a sp. gr. of 1·5, in which state it contains 25 per cent. of water. It is eminently corrosive, and its taste is sour and acrid. In commerce it is sometimes called *aquafortis*, and generally occurs of a yellowish colour, owing to its containing nitrous acid in solution; besides which, it is often highly diluted, and contaminated with sulphuric and muriatic acids, as also with alkaline sulphates and muriates. Nitric acid is used in large quantities. It is employed in a great variety of chemical processes; in metallurgy and assaying; for etching on iron and copper; in dyeing; and in medicine.

NORWAY, the western section of the Scandinavian peninsula, extends from lat. 58° to 71° N., and from long. 5° to 31° E. Area, 134,309 sq. miles. Population, 1,194,827. It was an appanage of the crown of Denmark until 1814, when, by the convention of Kiel, it was united with Sweden; retaining, however, its own representative body, or Storthing. The executive power is vested in a viceroy and council at Christiania.

The general aspect of Norway is bleak, rugged, and steril. The shores are iron-bound, and on the west lined by numerous small islands, and indented by bays (*fiords*). The interior is mostly covered with a rocky mass of mountains, or lofty plateaux (*fields*); and only about 100th part of the surface is supposed to be productive, though the climate is less rigorous than that of Sweden, particularly on the coast, owing to the prevalence of westerly winds. The lowest tracts, and those to which cultivation is chiefly limited, occur around Christiania Fiord and the adjoining shores of the Skager-rack, or to the S. and E. of the Bay of Drontheim. In other parts it is confined to the narrow valleys by which the mountain-masses are indented. The land is mostly the property of the farmers, and agriculture is in a rude state: the principal crop is rye, next oats, flax, and potatoes; but the grain raised is insufficient for the consumption. The manufactures are almost wholly domestic; and the internal trade is trifling, owing to the thinness of the population and the defective means of communication. The rivers are numerous, but their course is impetuous, broken, and unfit for navigation; though some are in part used to float down timber from the forests, which, with the fishings and mines, constitute as yet the chief sources of wealth.

The principal timber is pine; the most extensive forests are those covering the eastern declivity of the southern range, called the Norrska Fiellen, and the hilly country eastwards; the produce of which is mostly shipped from Drammen, Langesund, Christiania, Christiansand, Frederickstadt, Frederickshald, and other southern ports; being previously, however, cut into balks, beams, and deals,—an operation which affords employment to numerous saw-mills. In 1835, the quantity exported was 225,772 lasts; whereof 64,039 were sent to Holland; 62,737 to France; 55,995 to the United Kingdom; and 32,176 to Denmark. Before 1810 the exports to Britain were much larger, but in that year a heavy duty was imposed on Baltic timber above Canadian, which led to the substitution of the latter, though much inferior. The late modification of the timber-duty, however, by Sir Robert Peel (1842), will perhaps stimulate the inhabitants to improve the means of conveyance between the forests and the ports, and thus lead in time to increased shipments.

Fishing is the chief branch of industry along the western coast. The principal station is the Lofoden Isles, especially East Vagoe; but the produce is exported from Bergen, Drontheim, Christiansand, and other western ports on the mainland. In 1835, the shipments consisted of 29,733,313 lbs. dried cod, &c., and 16,074,141 lbs. lubfish, sent chiefly to the S. of Europe; 470,712 barrels herrings, mostly to the Baltic states; 749,302 lobsters, to London; 4,227,524 pots train oil, to Holland, Prussia, Hamburg, &c.; besides salmon, anchovies, and other fish.

Iron occurs in immense layers in the E. declivity of the Norska Fiellen, in the province of Christiansand; and in 1835, 3,440,170 lbs. were shipped in bars, besides 330,083 lbs. in pig, mostly to Denmark, from Oesterilsœer, Langesund, and Christiania. Copper abounds in the Dovrefield range, at Roraas, Medal, and Selby; and in 1835, 2,460,000 lbs. ore were exported at Hammerfest, chiefly to Britain; besides 759,384 lbs. refined metal at Drontheim, to the Netherlands and Altona. Cobalt, found in the E. declivity of the Norrska Fiellen, is mostly shipped at Drammen, in the form of smalts; 228,477 lbs. being exported in 1835, chiefly to Holland and England. Silver is worked at Kongsberg. Besides which, lead, zinc, marble, and slate, are found in various places, though as yet they scarcely form articles of exportation.

The only other articles of export deserving of notice are bark, bones, and horns; skins, especially those of the rein-deer, the hunting of which is a leading occupation in the northern districts; oil-cake, feathers, and grindstones.

The imports consist principally of corn, butter, cheese, and provisions from Denmark; colonial produce from Altona, Hamburg, and Britain; the last likewise furnishing earthenware and other manufactures; wine, brandy, fruit, and dressed leather from France; cheese, iron pots, hoops, flax, and rape and linseed oil from Holland; and hemp, flax, and sailcloth from Russia. In 1835, the shipping entered inwards from foreign countries amounted to 6599 vessels, 234,989 lasts; whereof, from Holland, 55,351 lasts; Britain, 49,634 lasts; France, 47,874 lasts; Denmark, 36,396 lasts: the chief ports of entry were,—Drammen, 38,276 lasts; Bergen, 22,764 lasts; Langesund, 19,866 lasts; and Christiania, 19,545 lasts.

The shipping of Norway is slowly on the increase: in 1835, there belonged to it 2272 vessels, of 75,459 lasts, navigated by 11,279 men. Much of it is employed in the carrying trade of other countries; while of the shipping entering from foreign ports, more than two-thirds is under the national flag.

PORTS.—1*st*, *On the Skager Rack*,—Christiania, the capital, in lat. 59° 54′ N., long. 10° 45′ E., is picturesquely situated at the bottom of a deep fiord, uniting with the farthest N. point of the Skager Rack, pop. 23,121. Drammen, a long straggling town, 20 miles S. W. of Christiania, pop. 7584, is the principal seat of the timber-trade. The chief others are Langesund, Frederickstadt, Frederickshald, Laurwig, Krageroe, Oestorilsœer, Arendal, and Christiansand.

2*d*, *On the West Coast*,—Bergen is a strongly fortified town in a bay, with a commodious harbour, though of dangerous access; lat. 60° 24′ N., long. 5° 18′ E.; pop. 22,339. Drontheim or Trondheim, the ancient residence of the Norwegian kings, lies on a large fiord, in lat. 63° 26′ N., long. 10° 24′ E.; pop. 12,700. The chief others are Christiansand, Stavanger, and Flekkefiord.

MEASURES, MONEY, &c.

Measures and Weights, generally same as Denmark.

Money.—Accounts are kept in species-dollars, divided into 5 marks or orts, each of 24 skillings.

The silver species-dollar = 2 Danish rigsbank dollars = 4s. 5d. sterling; but money is reckoned in the paper of the Bank of Norway. In 1836, the Storthing fixed 115 and 110 paper dollars as the maximum and minimum rates at which the bank could pay 100 dollars in silver; making the value of the bank dollar about 4s. This bank, established in 1816, has its principal office at Drontheim, with branches at Christiania, Bergen, and Christiansand. The notes for 24 skillings, 60 skillings, and 1 species-dollar, are printed on white paper; those for 5 species-dollars on blue; those for 10 species-dollars on yellow; and those for 50 species-dollars on green paper.

There are no gold coins; and although silver dollars, and half dollars, are in circulation, yet for all sums above 24 skillings (9½d.), the value of the lowest bank note, paper money is in general use. The *skillemynt*, or small money, consists of silver pieces of 4 and 2 skillings, and copper coins of 1 and 2 skillings value.

Exchanges with foreign countries are usually effected in banco, through the medium of HAMBURG.

NOTICE, in the law of bills of exchange and promissory notes. A holder of a bill is bound to give notice of non-acceptance or non-payment, to any party other than the acceptor or maker, on whom he means to claim for recourse. Want of notice of non-acceptance, however, is no bar to the claim of an onerous indorsee, who has taken the bill before it becomes due, and without marks of dishonour. If a conditional acceptance is taken, notice must be given, otherwise the parties may be released. Notice is required, that the drawer and indorsers may take measures, through their transactions with the drawee or otherwise, to secure their remedy in the case of being compelled to take up the bill. It is a presumption of law that damage is occasioned where notice is omitted; and proof to the contrary will not be received. If the bill is for the accommodation of the drawer, and the drawee has no effects of his, and is not otherwise under any obligation to accept or pay, the drawer is not entitled to notice of dishonour. But the nature of the bill, as between the original parties, will not affect the right of an indorser who has been an onerous holder, to notice. If the drawee has had any effects of the drawer in his hands, "it would be dangerous and inconvenient, merely on account of the shifting of a balance, to hold notice not to be necessary" (*Chitty*, 328). It is no excuse for want of notice, where there are effects, that the drawee has explained to the drawer that he would not be able to provide for the bill. Notice from any party accrues to the benefit of every other party, between the person who gives it and him to whom it is given. The notice must bear that the holder intends to claim recourse, and so information of dishonour, casually obtained, or communicated by a third party, will not suffice; but a holder who sends notice to his immediate indorser, may profit by its being conveyed to the drawer if without delay, either directly from that indorser, or from him through another indorser. It is prudent on the part of each party who intends to claim recourse to send notice to every party against whom he thinks he may have any occasion to exercise the right of recourse. In the case of a foreign bill, when the notice is to a party abroad, information should be conveyed of protest having been taken. [PROTEST.]

There is no particular form for notice; it is sufficient that both the dishonour and the intention to claim in recourse be distinctly stated. Notice should be sent without delay; it may be sent immediately on acceptance or payment being absolutely refused, as such refusal is dishonour, though retracted. Where parties reside in the same place, notice of non-payment should be given on the expiration of the day following the refusal; where they reside in different places, it should be posted on such day following. "It is settled that it is *never necessary* to give or forward notice of the non-payment *on the same day* when a bill or note falls due" (*Chitty*, 482). The same rule applies to non-acceptance of inland bills; "but it is now settled that in the case of a *foreign* bill, notice should be given on the day of the dishonour, if any post or ordinary conveyance sets out on that day; and if not, by the next earliest conveyance" (*Chitty*, 337). Each party has a day for giving notice, and "he will be entitled to the whole day, though the post by which he is to send it goes out within the day, and though there be no post the succeeding day for the place to which he is to send. Therefore, where the notice is to be sent by the post, it will be sufficient if it be sent by the post of the following day, or if there be no post on the following day, on the day after" (*Bayley*, 270). Sunday is not counted a day in notices; and the person who receives one on that day is in the same situation as if he received it on Monday. Days set apart by the religion of the individual to be kept holy, seem generally to be held equivalent to Sunday. Bills, the term of payment of which would happen on Sunday, Good Friday, or Christmas-day, are payable on the previous day. [GRACE, DAYS OF.] By 7 & 8 Geo. IV. c. 15, when a bill becomes payable on the day before Good Friday or Christmas-day, it is unnecessary to give notice until the day after such Good Friday or Christmas-day; and when Christmas occurs on Monday, notice of a bill, payable on Saturday, need not be given till Tuesday. By § 2 the same rules are made applicable to days of fasting appointed by royal proclamation. These provisions do not extend to Scotland. In England, by 3 & 4 Anne, c. 9, § 5, to obtain remedy on inland bills for *costs, damages*, and *interest*, a protest must be taken and notice sent of it within fourteen days. In extending a similar provision to Scotland, by 12 Geo. III. c. 72, § 41, the terms used were of such a general nature, that the courts decided that notice of dishonour on inland bills may be sent at any time within fourteen days, to preserve recourse. Bills between Scotland and England are not considered inland bills in as far as respects this act. It seems not to be decided whether the notice ought to be received, or must only be despatched within fourteen days.—(*Bell's Com.*, i. 419.)

Delay to give immediate notice may be excused by the circumstances. The absence of the drawer from his usual place of business and residence, and the sudden illness of the holder, may constitute an excuse; but the absence of the holder, in consequence of the sudden death of a near relative, is no excuse. A holder can only be called upon to use due diligence to discover the party, and if there is any impediment, notice, without undue delay after discovery has been made, suffices. Due care must be taken to provide for the notice reaching the proper person. If the holder knows the particular address of the drawer in a large town, where a letter is not likely to reach him without that address, it should be given in full; but if the address cannot be ascertained, or the party is distinguishable by his mere name and the town in which he lives, notice addressed in such form will suffice. If the party is a bankrupt in England or sequestrated in Scotland, the notice must be given to his assignee or trustee. Notice to a company through one of the partners suffices. When a bill has been drawn by a firm upon one of the partners, it is unnecessary to give notice of dishonour to the firm. If the holder give time, and send notice of non-payment to the drawer, he will not require to give second notice on expiry of the time without payment. An agent employed to present a bill is responsible to his employer for neglect of notice. Notice may be held as received by the party entitled to it. Payment of a part, promise to pay or to see paid, a promise "to set the matter to rights," &c. have been held to amount to a waiver. If a person has made a promise to pay, without having had notice, it is now held as a waiver of that notice, though he made the promise in ignorance of his right to found on want of notice, provided there is no fraud in the case. In promissory notes, the only parties to receive notice are indorsers.—(*Bayley on B.*, 252-313. *Chitty on B., 9th edition*, 327-343, 433-506.)

NOVA SCOTIA, a province of British America, consisting of a peninsula of irregular shape, connected with New Brunswick by the narrow Isthmus of Chignecto, and lying between lat. 43° 20′ and 46° N., and long. 61° and 66° 20′ W. Area, 15,617 sq. miles. Population, in 1838, 154,991, mostly of British origin, but including likewise a number of settlers of French descent, called Acadians, some negroes, and a few aborigines. The administration is vested in a lieutenant-governor, a council of 12 members appointed by the crown, and a house of assembly of 41 members, elected by 40s. freeholders.

The aspect of the shores is bleak, and in many parts rugged. The surface of the interior consists mostly of bold undulations, but there is no considerable elevation, the highest land (Ardoise Hill, near Windsor) being only 810 feet above the sea. A considerable portion is occupied by lakes; and the soil is not generally fertile, though there are some rich tracts on the banks of the rivers and at the heads of the bays. The finest districts are Annapolis and the other counties adjoining the Bay of Fundy, the most productive and best settled portion being the country surrounding the Minas Basin; but the most important part is the district of Halifax, the capital on the opposite side, which communicates with the preceding by a canal and the river Shubenacadie. The climate is mild and salubrious; oats, rye, and barley, are the principal objects of cultivation; wheat is also raised in choice situations, though not in quantities sufficient for the consumption; and there are numerous orchards; but grazing is the chief branch of agricultural industry, and for which, indeed, the province is best adapted from its hilly surface and copious irrigation. A large portion of the country, however, is still covered with forests, which, under the stimulus of the discriminating duties imposed by the mother-country in favour of colonial produce, leads here, as in New Brunswick and Canada, to the industry of a considerable portion of the inhabitants being directed to the timber-trade. The wood is shipped mostly in the form of deals, battens, boards, planks, shingles, and staves, to convert it into which affords employment, as in the other provinces, to numerous saw-mills. The cod-fishery is also prosecuted extensively by the colonists. Another important branch of industry is that of mining. Coal and iron are abundant, and the former is pretty extensively worked at Pictou. Gypsum abounds in the western districts; and the "Nova Scotia blue grits," or grindstones, are celebrated all over America.

The situation of the province is advantageous, and its trade is steadily on the increase. The exports in 1834 and 1837 amounted respectively to £404,647 and £478,461. The latter was made up of fish, £181,961, chiefly dry cod, but embracing likewise a considerable quantity of salmon, mackerel, and herrings; wood and lumber, £143,736; coals, 31,472 tons, value £26,894; train oil, 199,333 gallons, £20,277; gypsum manure, 22,326 tons, £6738; grindstones, £12,085: the other articles consisting of cattle, seal-skins, furs, beef and pork, and reshipments of tropical produce. They are sent mostly to the West Indies, United States, and Britain. The imports in 1834 and 1837 amounted respectively to £703,917 and £790,765; mainly composed of wheat and flour from the United States and Germany, British manufactures, and West India produce. The preceding valuations, it has to be observed, do not include the trade with the adjoining states of British America. About 4000 vessels, having a tonnage of 330,000, arrive annually; and there are about 100,000 tons of shipping belonging to the province.

Ports.—Halifax, the chief port and capital, is situated on the S.E. side, in lat. 44° 39′ N. and long. 63° 37′ W.; pop. 20,000. Being directly open to the Atlantic, and its navigation scarcely ever interrupted by ice, it is our chief naval station in N. America, and affords secure anchorage for 1000 ships. It is entered by a creek 16 miles long, which terminates in a sheet of water called Bedford Basin, and is every where strongly fortified. Pictou, the port next in consequence, is situated on the N. coast; it carries on a considerable trade in lumber and coal. Both are free warehousing ports. The other places frequented by shipping are Yarmouth, Liverpool, Lunenburg, Windsor, Parsborough, Cumberland, Shelburne, and Digby.

Money, Duties, &c.—Accounts are kept in pounds, shillings, and pence sterling; in the same denominations in a nominal currency explained in the article CANADA; or in dollars and cents. The circulating medium is composed partly of British and American coins, and partly of notes issued by the Treasury, and by a branch of the Bank of British America and several local ones. The provincial revenue (exclusive of local assessments) amounts annually to about £60,000, derived principally from excise and customs: both are moderate,—the general rate of import duty on British manufactures being 2½ per cent. The crown duties, levied only on foreign goods, are explained in the article COLONY.

CAPE BRETON ISLAND, a dependency of Nova Scotia, is separated from it on the N.E. coast by the Gut of Canseau. Area 3000 sq. miles. Pop. 30,000. It is penetrated by a mediterranean sea, called the Bras d'Or, which divides it nearly into two parts. The settlements are confined to the shores. In 1837, the amount of the exports was £41,337, and of the imports £7591. The chief ports are Arichat, on the islet of Madame, on the S. side, from whence there are exports of dry and pickled fish; and Sydney, the capital, on the N.E., which carries on a considerable trade in coals, mines of which exist in the neighbourhood, as well as at Bridgeport. All the mines in Cape Breton Island, with those in Nova Scotia, are let to the General Mining Association.

NUTMEG (Du. *Muskaatnooten.* Fr. *Noix muscades.* Ger. *Muskatennusse*), a spice yielded by the fruit of a tree (*Myristica moschata*) indigenous to the Molucca Islands, which begins to bear when 10 years old, and goes on improving during the space of a century. The fruit, which is singularly beautiful, is pear-shaped, about the size of an apricot. As it ripens, the rind, which is nearly half an inch thick, and of a whitish colour, opens and displays the nutmeg in its black and shining shell, encircled by a net-work of scarlet MACE. It is gathered three times a-year. In preparing it for use, the mace is first stripped off, and the nutmeg, after being dried, is deprived of its shell, and soaked in sea-water and lime, in order to preserve it from insects, and, by closing its pores, to prevent its strength from evaporating. Three sorts are distinguished; namely, the male or barren, the royal, and the queen. The last, which are small and round, are preferred to the others, which are large and oval. Nutmegs are solid, unctuous to the feel, of a gray-brown colour, reticularly furrowed on the outside, and within yellow, variegated with brown undulating lines; odour fragrant and balsamic; taste warm and aromatic. They should be rejected when worm-eaten, light (from the oil being expressed), musty, or variegated with black lines. The active part, however, is confined to the dark-coloured veins, which are not apt to be worm-eaten. Dry lime forms the best kind of package for this spice.

The Dutch East India Company possess a monopoly of the spices of the Moluccas; and by their avaricious policy, the cultivation of the nutmeg-tree is confined to Banda-Neira, Way, Run, and Gounong. In all the others it has been carefully extirpated, because, being at a distance from the seat of government, they were supposed to afford better opportunities for smuggling. The tree has been introduced into Sumatra, Mauritius, and other parts of the East; attempts have also been made to introduce it into Cayenne and Trinidad; but the greater expense attending its cultivation in these places has hitherto prevented any reduction of the monopoly prices charged by the Dutch. About 120,000 lbs. are annually entered for consumption in the United Kingdom.

OIL OF NUTMEG.—This spice contains a fixed or solid oil, and a volatile oil; both of which are used for medical purposes. Of the former there are two varieties: the English, which is the best, occurs in pieces of about ¾ lb. in weight, wrapped in leaves of the banana; it has a uniform reddish yellow colour inside: and the Dutch, in larger pieces, wrapped in leaves or paper, and of a lighter colour. All kinds are frequently adulterated.

NUTRIA, OR NEUTRIA, an aquatic rodent little quadruped (*Myopotamus coypus*), inhabiting S. America, especially Chili, Buenos Ayres, and Tucuman; it is valued on account of its fur, which, like that of the beaver, is of two kinds,—the long ruddy hair, and the brownish ash-coloured fur at its base. The latter is now largely used in the hat manufacture; and about 220,000 skins are for this purpose annually imported into the United Kingdom from the States of La Plata.

NUTS, HAZEL (Fr. *Norsettes*, *Avelines*. It. *Naccinole*, *Avelane*. Sp. *Avellanas*), produced by different species of *coryli* or hazel-trees [FILBERT]. They are common in this country, but the best are brought from the S. of Europe, principally Spain. About 150,000 bushels are annually imported.

NUX VOMICA, the fruit of the *Strychnos nux vomica*, a tree indigenous to Malabar, Coromandel, and Ceylon. When ripe, it is about the size of an apple, is covered with a shell of an orange colour, and contains a pulp in which from three to five seeds are immersed. These seeds are round, flattish, and about ¾ inch in diameter, have a weak nauseous balsamic smell, an intense bitter taste, and contain a virulent poison. They are used in medicine, and have, it is said, been employed in brewing porter, though their use for the latter purpose is prohibited by statute.

O.

OAK (Fr. *Chêne*. Ger. *Eiche*. It. *Quercia*. Por. & Sp. *Roble*), a genus of trees (*Quercus*) embracing about 150 species, two of which, common in our forests, excel all the others in the production of timber. The common British oak (*Q. pedunculata*), "the father of ships," that which chiefly abounds in our island and the N. of Europe, is distinguished by having the acorns on footstalks: the sessile-cupped oak (*Q. Sessiliflora*) bears the acorns without footstalks, but has the leaf-stalks longer than the other; it is found chiefly in the W. of England, N. Wales, and the S. of Europe. The best oak is said to be that which grows in cold or elevated situations (if not stunted), on stiff, clayey soils, and is the longest in arriving at maturity. The common species is of slower growth than the sessile-cupped, and is commonly preferred to it; but there is great difference of opinion as to which is really the best; much seems to depend on the soil and health of the individual tree.

The "unwedgeable and gnarled oak," when cut down at a proper age (about 60 years) is superior to all other timber in point of strength, durability, and general application. It is eminently adapted for shipbuilding, particularly war-vessels, from its not splintering by shot. It is not grown in this country sufficient for the consumption; and large quantities are imported, especially from Prussia and Canada. The kinds principally used in the Royal Dock Yards are Welsh, Sussex, and Baltic,—the last being the most esteemed of the foreign kinds: the Adriatic, formerly much used, has turned out ill. In domestic architecture oak is only used in the largest and best buildings; occasionally for the principal beams; but its chief use is for door and window frames, sills, sleepers, king-posts of roofs, trussing for girders, sashes, gates of canal-locks, sluices, posts, and piles.

The white oak (*Q. alba*) of the United States is the kind chiefly used there for shipbuilding, houses, and liquor-casks; it is also imported into Britain. But the live oak (*Q. virens*), abundant in Texas, is the best American species. "African oak," sometimes used in shipbuilding in this country, is wood of a different genus.

OAKUM, old ropes pulled loose in order to be used in the caulking of ships.

OATH. [AFFIDAVIT.]

OATS (Dan. *Havre*. Du. *Haver*. Fr. *Avoine*. Ger. *Hafer*. It. *Vena*. Por. *Avea*. Rus. *Owes*. Sp. *Avena*. Sw. *Hafre*), the hardiest of all the cereal grains cultivated in Britain. Of the common species (*Avena sativa*) there are several varieties, as black, gray, dun brown or red, and white. The two first being the hardiest, are cultivated in Highland districts and on inferior soils in Scotland; but in England the black oat is now scarcely known, and the dun or red oat is nearly confined to the moors of Cheshire, Derbyshire, and Staffordshire; in Ireland, the black oat is the favourite kind in mountainous districts. The white oats, though less hardy and requiring a better soil, are yet earlier and heavier than the others, and are generally preferred, especially the subvariety called the potato oat, now almost the only kind cultivated on good land in England, the Scottish Lowlands, and Ireland. The seed-time of oats is March and April; four to six bushels are sown on an acre; and the produce varies, according to soil and preparation, from about 30 to 70 bushels per acre. They weigh from 35 to 45 lbs. a-bushel; yielding about 8 lbs. meal for 14 lbs. corn. Drought and heat are unfavourable to this grain, rendering it husky and tasteless. The nutritive quality of oats is smaller in a given weight than that of any other of the cerealia; but they are admirably adapted for the feeding of horses, the purpose to which they are principally applied; though, when ground into meal, they are also largely consumed as food by a great portion of the population of Scotland, the N. of England, and Ireland. The best oats are those of Scotland and Friesland in Holland. [Corn.]

OCHRE, a native earthy mixture of alumina, silica, oxide of iron, and other substances, found in beds in various places, particularly in England at Shotover Hill near Oxford, and in Italy. It is generally of a yellow or brown colour, but is sometimes reddened by calcination. It is prepared for use by grinding and elubriation; and is employed as an ingredient in painters' colours, and in the polishing of metals and stones. Nearly 5000 cwts. are annually imported.

OIL, a substance expressed or distilled from certain vegetable and animal matters, the distinctive characters of which are inflammability, insolubility in water, and (except palm oil and a very few others) fluidity in moderate temperatures. Oils are either *fixed* or *volatile*.

Fixed Oils.—*Vegetable fixed* oils are usually contained in the seeds of plants; though olive oil is extracted from the pulp which surrounds the stone. They are procured by bruising the seed, and subjecting the pulpy matter to pressure in hempen bags, a gentle heat being generally employed at the same time to render the oil more liquid. They are commonly of a thickish consistence and unctuous feel, and differ from volatile oils in leaving a greasy stain on paper which cannot be removed by heat alone. They are sometimes colourless, occasionally of a greenish or yellowish hue, when pure semitransparent, with little smell, and a mild taste. They are insoluble in alcohol, and their specific gravity varies from ·90 to ·96. When kept for some time they become rancid; and, when exposed to air, gradually increase in consistence, till at last they become solid. Those which retain their transparency after they have become solid,—as linseed, nut, poppy, and hempseed,—are called *drying oils;* while others which assume the appearance of tallow or wax, and become opaque,—as olive, almond, rape, and ben,—are called *fat oils*. The former are mostly used for paints, varnishes, and printers' ink; the latter are consumed as food, in medicine, soapmaking, and other branches; several of each kind being likewise extensively employed in the arts, and in the lubrication of machinery.

Animal oils, derived from the fatty matter of the whale, cod, seal, and others, are very analogous in composition and properties to the vegetable fixed oils; and in Britain, where the latter are comparatively expensive, the former are employed, both for the purpose of giving light and for the manufacture of soap.

Volatile or Essential Oil occurs in all odoriferous plants. It is found in all parts of them, and sometimes different in different parts of the same plant. It is the odoriferous principle of vegetables; but its quantity is not always in proportion to their degree of smell; nor is its degree of pungency and acrimony by any means in proportion to those of the subject from which it is drawn. The volatile oils are generally obtained by distilling the parts of the plants which afford them with water in common stills; a few are, however, obtained by expression, such as those of lemon, orange, and bergamot, which are contained in distinct vesicles of the rind of those fruits. They vary considerably in specific gravity. Oil of turpentine, the lightest, is ·792; oil of sassafras, the heaviest, 1·094. They are very numerous. The principal are, turpentine, clove, cinnamon, caraway, juniper, nutmeg, rosemary, and sassafras. Their general characteristics are,—a penetrating odour and taste, and commonly a yellowish colour; they are for the most part soluble in alcohol, and very sparingly soluble in water. These solutions constitute *perfumed essences* and *distilled waters;* the former principally employed in perfumery, the latter in pharmacy. The high-priced kinds are not unfrequently adulterated with alcohol and fixed oils. The former addition is rendered evident by the action of water; the latter by the greasy spot which they leave on paper, and which does not evaporate when gently heated. The oils of commercial importance are treated separately under their appropriate heads.

The customhouse practice is not to gauge oils paying duty by the tun, but to weigh them, reckoning every 9 lbs. of net weight equal to an imperial gallon.

OKE, a Turkish weight equivalent to 2¾ lbs. avoirdupois nearly.

OLDENBURG, a German state composed of the duchy of the same name, bordering on the N. Sea, and on the land side contiguous to Hanover, Bremen, and the Weser; and the small principalities of Lubec and Birkenfeld. Total area 2440 sq. miles. Pop. 269,000. Government monarchical, without any assembly of estates.

The country is level, and the soil in general poor. Agriculture and cattle-rearing are the chief occupations of the people. Exports, oxen, horses, linen, leather, beer, hides, rags, &c., chiefly to Holland and the Hanse Towns, especially Bremen. In 1836, Oldenburg joined in a commercial league with Hanover and Brunswick. [Bremen. Germany. Prusso-German Customs Union.]

OLIBANUM or **FRANKINCENSE** (Fr. *Encens*. Ger. *Weihrauch*. It. *Incenso*), a gum-resin procured from a plant (*Boswellia Thurifera*, Roxb.) found in the mountainous parts of India. Two qualities are distinguished: olibanum in grains, and common olibanum. The first occurs in small roundish pieces of a light yellowish colour, very brittle, and semi-transparent; taste acrid and slightly bitter. The second is in larger pieces, mostly of a dark colour, and mixed with impurities. The odour of olibanum is balsamic, and it burns with a clear light, diffusing a fragrant smoke. It is used principally as incense in Roman Catholic churches, and, though rarely, in medicine.

An Arabian kind of olibanum, formerly imported from the Levant, is now seldom met with, and its origin is a matter of doubt. In America, various trees yield substances analogous to olibanum, and used in a similar way.

OLIVE, the fruit of a tree (*Olea Europæa*), a native of the south of Europe and north of Africa, and extensively cultivated in France, Spain, and especially Italy. It is a small, green, oval berry, containing a double-celled nut. Olives, when fresh, have a harsh, bitter, and extremely disagreeable taste; and they are eaten only after having been steeped for several days in a ley of wood-ashes, and then pickled in a strong solution of muriate of soda. Flavoured with some spice, they are occasionally used after dinner in Britain, but more abundantly on the Continent, to improve the flavour of certain wines. Olives are principally imported into this country from France, in barrels of 28 gallons, and from Spain, in jars of two gallons. An allowance of ⅓ to ½ is made at our custom-house for pickle. This fruit is, however, chiefly valued for the oil obtained from it.

The matured wood of the olive is hard, compact, and reddish in colour. It takes a fine gloss, and is made into snuff-boxes and trinkets.

OLIVE OIL (Fr. *Huile d'olives.* Ger. *Baumöl.* It. *Olio d'uliva.* Por. *Oleo das azeitonas.* Sp. *Aceite de aceitunas*), the lightest of the fixed oils, is derived from the fruit on its arriving at maturity in November. The olives are first crushed in a mill, care being taken that the millstones are so placed that they may not break the nuts. The mass being then put into bags, and subjected to moderate pressure in a screw-press, yields a considerable quantity of *virgin oil*, of superior quality. After this is completely expressed, the mass, stones and all, is either returned to the mill, and the stones are broken, or the same effect is produced by mixing up the whole with boiling water, and increasing the power of the press. By this means the common kind of oil is obtained; while, by repetition of the process, an inferior sort is procured, valuable for the preparation of soap. Virgin oil is of a very pale yellowish-green colour; inodorous when fresh, but emitting a peculiar smell when old; taste bland and purely oily, but becoming in time slightly rancid: it congeals at 38° Fahrenheit. Sp. gr. ·915. The common kind is of a brownish-yellow or greenish colour, and a taste or odour in a greater or less degree subrancid. Olive oil, being high priced, is frequently adulterated with cheaper kinds; but the fraud is known by a less tendency to congeal by reduction of temperature. This oil, in the countries of production, is an important article of subsistence to all classes; and it is also employed to burn in lamps. In our country, as food, it is used almost solely in cookery and for salads as a luxury; but considerable quantities are employed in the making of fine soap, in the woollen manufacture, and in other arts. In medicine, it is used as an emollient, and to form cerates and plasters.

Olive oil is prepared in immense quantities in Italy, especially in the provinces of Apulia and Calabria in Naples, the produce of which is largely exported from Gallipoli, the principal oil-mart of the peninsula: this kind is of fine quality, a distinction partly due to the influence of the tufa cisterns in which the oil is purified at this port before being shipped. The Florence and Lucca oil shipped from Leghorn is likewise in high esteem. The Sicilian kind is generally of low value. Olive oil is also largely produced for exportation in Spain. In France, the best is made in the provinces of Languedoc and Provence, the finest being that of Aix. About 2,000,000 gallons are annually imported into this country for consumption, chiefly from Italy and Spain, and in smaller quantities from Portugal, the Ionian Islands, Turkey, Barbary, and France.

The customs tare, when imported in jars, is ⅓ for each jar, and ⅛ for foot or sediment; a chest contains 60 flasks = $2\frac{1}{12}$ imperial gallons. [OIL.]

ONION (Fr. *Oignon.* Ger. *Zwiebel.* Por. *Cebola.* Sp. *Cebolla*), a well-known biennial plant (*Allium cepa*), having a bulbous root varying in size according to the kind, soil, and cultivation. The small are more pungent than the large; and those which have a tinge of red or purple, than those which are white. The "Strasburg" and its varieties are the hardiest in this country. But our onions are surpassed by those imported from Portugal, Spain, and the south of France, which are much larger, and more mild and succulent. Onion seed is also imported in large quantities.

ONYX, a species of agate, in which the siliceous particles are arranged in alternating horizontal layers of opaque white and translucent blue gray or brown. It is employed for cameos, the figure being cut out of the opaque white, and the dark part forming the ground, or the contrary. It is most valuable when the contrast of colours is strong, and when the layer is thick enough to give a high relief to the object to be engraved.

OPAL, a beautiful precious stone, of which there are many varieties. Sp. gr. 2·09. The most valuable is the *noble* or *precious opal*, of a white, bluish, or yellowish white colour, and when viewed by transmitted light, yellow. It exhibits brilliant and changeable reflections of green, blue, yellow, and red,—a play of colours which has not been satisfactorily explained. It is translucent; fracture conchoidal; with a resinous lustre; easily broken, but scratches glass. Its chief localities are, Czervenitza in Hungary, the Faroes, Saxony, and at Gracias a Dios in Honduras, whence it has been brought in specimens of considerable size and of great splendour. This kind of opal is sometimes called the *Nonnius opal*, from the senator Nonnius, possessor of the famous opal of Rome, worth 20,000 sesterces, who preferred banishment to parting with it to Antony.

The common opal differs from the precious chiefly in wanting the play of colours; it is found at the Giant's Causeway and the Hebrides. A variety has been met with in India; and Mr Milburn states, that a beautiful Oriental opal is worth double the price of a sapphire of the same size. They occur from the size of a pin-head to that of a walnut; but a fine stone of this last size is extremely rare and precious. Much care is necessary in purchasing them, as there are many counterfeits.

OPIUM (Fr. *Opium*. Ger. *Mohnsaft*. It. *Opio*. Arab. Mal. *Ufyoon*. Pers. *Sheerikhaskash*. Hind. *Ufeem*. Turk. *Madjoon*), a narcotic drug, composed of the inspissated juice of the unripe capsules or fruit of a species of poppy (*Papaver somniferum*) extensively cultivated in Asia; also to some extent in European countries, principally for the oil of its seeds. The juice is collected in a pot, and worked into masses or cakes, which are covered with leaves, to prevent their sticking together, and then dried and packed into chests. Two kinds are chiefly distinguished,—Turkey and East India.

Turkey or Smyrna opium, so called from the place of shipment, is compact; at first, softish and reddish brown, but becomes hard and blackish; lustre waxy; smell heavy and disagreeable; taste at first nauseous bitter, afterwards acrid, and rather warm; highly inflammable; and when good, not entirely soluble in water. Sp. gr. 1·336. The best is in flat pieces, enveloped in large leaves, and, besides, covered with the reddish capsules of a species of rumex. Other varieties occur in the Levant trade, as "Constantinople opium," mostly sent to Germany, "Egyptian opium," and "Trebizond opium;" but they are inferior, and not so commonly the subject of British commerce.

East India opium is less compact and softer than Turkey; also darker, fainter in odour, less bitter, and more nauseous and weaker; containing less MORPHIA. But this inferiority is fast disappearing; and, of late, that manufactured in some districts is of the finest quality. It is produced almost exclusively within the Bengal presidency, and in Malwa in Central India. In the former, the cultivation of the poppy is confined to certain districts within Benares, and in Bahar near Patna, in order to secure the monopoly of the Company, who purchase the crop from the ryots, at the price of 1½ rupee per pound, and afterwards dispose of it at stated public sales in Calcutta. At the sale of February 1840, the upset price was Rs. 400 per chest (of 2 factory maunds, or 149⅓ lbs. avoird.); but the rate paid at different times is of course subject to variation. In Malwa, which belongs to native rajahs, the trade is free. The Company made great exertions to procure the whole of it by treaty; but, in 1830, they relinquished this object, and agreed, for a transit duty of Rs. 125 per chest, to grant passes for its conveyance to Bombay, from whence this kind is wholly exported.

Opium is chiefly employed with us as a sedative medicine. But as the drug, when taken in small dozes by those unaccustomed to it, communicates a peculiar kind of exhilaration and energy to the mind, as well as a pleasurable condition to the whole system, accompanied with increased capability of exertion, it is largely consumed in the East in much the same way as wine and spirits are taken in Europe. By degrees, as the habit becomes confirmed, the craving increases, and to produce the desired feeling, the dose must constantly be augmented, till at length,—each excess being followed by depression and torpor,—equal injury is produced as by habitual dram-drinking. In Turkey and Persia opium-eating, once very common, is on the decline, owing to the less rigid observance of Mohammed's injunctions against inebriating liquors; but in China the use of it is on the increase. In the last country, however, it is smoked, a custom less pernicious than eating, owing to the preparation which the drug has to undergo before being fitted for the pipe. Indeed, taken in moderation in this way, it is said to have no bad consequences; and in regard to China, it may be observed, that opium debauchees do not appear to be more common there than drunkards in other countries.

The drug was formerly imported into Britain solely from the Levant, but, owing to the improved quality of the Indian produce, a portion of our supply is now made up of the latter. The amount of foreign and Indian opium entered for consumption in 1840 was 46,736 lbs., having nearly doubled within 10 years. This trade, however, is insignificant when compared with that which has grown up between India and China. Before 1800, the quantity sent to the latter was inconsiderable; and in the year 1817-18 did not exceed 2,435 chests, in value $2,951,100; but in 1832-33 it was augmented to 23,693 chests; namely, 6,410 Bahar or Patna; 1,880 Benares; and 15,403 Malwa; the total value being $15,352,429, or (estimating the dollar at 4s. 2d.) £3,198,422: So that in 15 years the quantity had increased about tenfold, and the value between five and six fold; the average price, meanwhile, having declined from $1,212 to $647 per chest, nearly one-half. This was exclusive of about 1000 chests Turkey opium, re-exported from Britain to China. The trade has since been further extended. In 1837-38 the quantity of Bahar and Benares opium exported was 19,307 chests, valued (in Calcutta) at £2,114,025; and nearly the same amount was fixed for exposure at the government sales in 1840. Of Malwa, passes were granted in the three years ending 1837-38 for 45,317 chests, or, on an average, 15,106 a-year. Hence, the total annual export from India, when war broke out in 1839, must have been about 35,000 chests, in value nearly £4,000,000; which, excepting small parcels sent to the Malay Peninsula, Eastern Islands, and England, was shipped wholly to China. The net revenue derived from the monopoly in Bahar and Benares in the three years ending 1839, was Rs.3,46,96,196; and for transit passes from Malwa to Bombay, Rs.60,49,230; total, Rs.4,07,45,426. (*Par. Paper*, 1841, No. 22.) This gives, on an average, the net yearly revenue of the Company from the drug Rs.1,35,81,808, equal £1,273,296 sterling.

The opium-trade, though forbidden so early as 1796, attracted little notice from the Chinese government before 1820. Macao was for some time its centre; but, owing to the misconduct of the Portuguese, it was removed to the small island of Lintin, in the estuary of the Canton river. There, notwithstanding many "paper prohibitions," it was conducted with regularity, under the immediate notice of the imperial functionaries,—who, indeed, are the chief opium-smokers,—until the arrival of Commissioner Lin at Canton in 1839, when the British superintendent, Captain Elliot, and a number of merchants were seized (April 15), and retained until the delivery (May 30) of the stock then on hand, 20,283 chests, valued at £3,000,000. Since this atrocity, the trade has been pursued in a more irregular manner; mostly indeed by armed clippers, who, braving every danger, beat up the China seas even in the very height of the monsoon, and, wandering along the coast, dispose of their cargoes to junks, who bring out dollars and sycee silver in exchange. The quantity thus sold is said to be nearly as great as ever,—a circumstance which can occasion little surprise when it is considered that, besides the weakness and corruption of the imperial government, the drug, while its produce-cost in India is under Rs.400 a-chest, finds a market in China, notwithstanding a late reduction of price, at from $400 to $500.

The motive usually assigned for the prohibition of this traffic is the demoralizing tendency of opium. "If there exist a drug destructive of life, incessant efforts should be made to keep it at a distance. The men accustomed to it can by no means relinquish it; their faces become as sharp as sparrows'; and their heads, sunk between the shoulders in the form of a dove; the poison flows into their inmost vitals; physic cannot cure their disease; repentance comes too late for reform." Yet the poppy is cultivated in China in six different provinces, in one of which the opium prepared is said annually to amount to several thousand chests. Without resting upon this, however, it is quite certain that the moral reason is not the only one. Formerly a large proportion of the British imports of tea were paid for in bullion; but since the expansion of the opium-trade, the balance has been reversed, and there is now a constant drain of treasure from China. The imperial government, viewing the precious metals as the only true riches of a state, regard this as a national grievance; and the trade is accordingly denounced, in their state papers, as one which occasions "an oozing out of silver, whereby the fathomless gulf of the outer sea will soon be the receptacle of the easily exhaustible wealth of the central spring!" Nor, in looking to the influences which have guided the Chinese, is it to be forgotten, that their increased rigour and jealousy has been contemporaneous with the advance of the British to their south-west frontier and the regions of Central Asia.

OPOBALSAM, called also Balm of Gilead and Judiacum de Mecca, is a liquid resin, obtained from the *Amyris Gileadensis*, a tree found in Arabia, Abyssinia, and Syria. It is at first turbid and white; of a pungent smell, resembling turpentine, but sweeter; and of a bitter, acrid, astringent taste: By age it becomes thin, limpid, of a greenish hue, then of a golden yellow, and at length of the colour of honey. It is seldom obtained genuine in Europe; the Canada balsam, which is generally substituted for it, answering equally well. In Turkey it is used as a cosmetic. Carpobalsamum and Xylobalsamum are inferior qualities obtained from the fruit and twigs of the same tree.

OPOPONAX (Arab. *Jawesheer*), a medicinal gum-resin, obtained from the stalk or resin of a tall plant (*Opoponax Chironium*, Koch) found in Asia Minor. It occurs in small grains or drops, and in masses,—the latter, however, being generally mixed with foreign substances, and inferior; colour internally, pale yellow, frequently mixed with white, and externally, inclining to red or orange; taste bitter acrid; and odour disagreeable. It is now scarcely used.

ORANGES (Fr. *Oranges*. Ger. *Pomeranzen*. It. *Melanarincino*. Por. *Laranjas*. Sp. *Naranjas*), are the product of a shrubby tree, of eastern and tropical origin, but now extensively cultivated in the warmer parts of the temperate zone, particularly in the countries adjoining the Mediterranean, Portugal, and the Azores. It belongs to the citron genus. Two species are principally distinguished,—the sweet and the bitter.

The SWEET ORANGE (*Citrus Aurantium*); flowers, white; fruit, roundish, seldom pointed, golden-yellow, or tawny; and pulp very sweet. There are many varieties. Those principally met with in Britain are the St Michael's, a small pale-yellow kind, with a thin rind, brought from the Azores; and the China, chiefly imported from Portugal. The former is the most esteemed.

The BIGARADE, or BITTER ORANGE (*C. Bigaradia*); flowers also white, but larger and sweeter than the preceding, on which account they are in demand by the perfumer; fruit, uneven, globose, deep-yellow, with a bitter and acid pulp. The Seville, a Spanish variety, is that chiefly imported into Britain, where it is consumed in the preparation of candied orange-peel, bitter tinctures, and liqueurs.

The orange has been well called "the universal fruit of commerce." The aromatic oil and the rind preserve it from the effects both of heat and of cold; while the acridity of the former renders it proof against the attacks of insects. It is thus long in rotting if the rind is uninjured, and it is kept from moisture, and so ventilated as not to ferment. From these qualities, joined to their abundance in the countries of production, oranges may be had fresh and cheap in every region of the world, and at almost every season. They are gathered for exportation in October, November, and December, while still green, that they may not spoil in the transport; and they are not fully ripe till spring has commenced. They are imported into Britain from the Azores and Portugal; Spain, especially Algarve and Andalusia; and the Gulf of Genoa and Naples; the amount in 1840, including lemons (not separated in the public accounts), being 119,915 packages, each not exceeding 5000 cubic inches; 167,574 packages between 5000 and 7300 cubic inches; and 44,674 between 7300 and 14,000 cubic inches; besides about 12,000 lbs. of orange-flower water, and considerable quantities of oils and essences.

ORCHILL, OR ARCHILL (Fr. *Orseille*. Ger. *Orselje*. It. *Oricello*. Sp. *Orchilla*), a whitish lichen (*Lichen orcella*) found in Guernsey and Portland Island, but chiefly obtained from the Canary, Cape Verde, and Madeira Islands. It grows on rocks, about 3 inches in length, roundish, and many stalks proceed from one root. The best is of a darkish colour. It is imported into Britain in the state in which it is gathered; and about 500 cwts. are annually entered for consumption. This weed yields a rich purple tincture, used chiefly in dyeing silks and ribbons, but rarely employed alone, on account of the fugitive nature of the colour, and its extreme dearness. LITMUS is a preparation of orchill in square cakes.

ORGOL, OR ARGOL, a common name for crude TARTAR.

ORPIMENT (Ger. *Operment*, *Rauschgelb*), or yellow sulphuret of arsenic, generally occurs massive and lamellar, of a bright lemon or golden colour, sometimes running into red or brown; soft and flexible, but not elastic; insoluble in water; and inodorous. Sp. gr. 3·5. It is a natural product of China, South America, and other countries. The finest, called golden orpiment, comes from Persia. Artificial orpiment is manufactured chiefly in Saxony; it occurs in the form of a yellow powder. This substance is commonly employed in dyeing and calico printing; but the finer native varieties are reserved for artists. It is often adulterated with king's yellow, an ill-made poisonous compound, frequently containing nothing else than white arsenic and sulphur; it is quite soluble in water. The name red orpiment is sometimes given to REALGAR.

ORRIS ROOT, OR FLORENTINE ORRIS, is obtained from the *Iris Florentina*, a native of the south of Europe. It is tuberous, oblong, about an inch thick, white; odour like that of the violet; taste when dry bitter. The roots are imported from Leghorn; and, after being ground into powder, are used by perfumers, and in medicine.

ORSEDEW (Ger. *Flittergold*), an article resembling gold leaf, made of copper and zinc, chiefly at Manheim, in Germany, whence it is called MANHEIM GOLD. It is largely imported into this country, made up in books, and enclosed in casks and cases. A part is entered for home consumption, chiefly in tinselling dolls and toys, but the greater portion is reshipped to the East Indies, where it is in demand by the natives for decking their gods, priests, and dancers.

OSTEOCOLLA, an inferior kind of glue, manufactured from bones.

OSTRICH FEATHERS, a valuable article of ornamental dress. The ostrich is found only in Africa, and the best plumes are imported from Barbary. The finest are the brilliant white feathers from the wings of the male, which, in a bird in full plumage, contain forty.

OUNCE (*Uncia*, a twelfth part), is a common division of the pound weight.

OXALIC ACID (Ger. *Sauerkleesaüre*), a vegetable acid found in considerable quantity in sorrel and rhubarb. It is most readily procured by the action of nitric acid on sugar, and hence has been termed acid of sugar. It occurs crystallized, in four-sided prisms, transparent, and so intensely sour, that if 1 grain be dissolved in 3600 grains of water, it will be perceptible to the taste; while in 200,000 times its weight of water it may be detected by means of a simple chemical test. This acid is highly poisonous, and accidents have frequently occurred from its being administered instead of Epsom salts, which it resembles in appearance. It is used in calico-printing, and by straw-hatmakers; also for cleaning boot tops, and for removing iron stains and ink spots from cloth. United with bases, it forms salts, called oxalates, which are applied to various purposes. It is an object of considerable manufacture, especially in Switzerland, where it is prepared from the juice of wood sorrel.

OYSTER (Fr. *Huitre*), a testaceous fish (*Ostrea edulis*) common on the coasts of Britain and most other countries. Several kinds are highly prized by epicures. In London, the Colchester and Milton oysters are held in most esteem. Edinburgh has her "whiskered Pandores," and latterly Aberdour oysters; and Dublin the Carlingford and Powldoodies of Burran. For the convenience of obtaining a ready supply, the oysters are often transported from their original beds, and laid down on other places of the coast; but these exiles are seldom found in such perfection as *natives*. In France, the oysters of Cancalle in Brittany, and of Dieppe, are most esteemed: the latter are of a greenish colour, communicated artificially.

The British trade in oysters ranks in importance with that in herrings and salmon, and affords employment to a numerous body of men, who necessarily become hardy seamen. In Jersey alone, 250 boats are employed, and 200,000 bushels annually exported. Immense quantities are carried to Billingsgate, where the season opens with great bustle on the 4th of August, at noon, and terminates on the 12th of May.

The private right in oyster-beds is protected in England by the act 7 & 8 Geo. IV. c. 29, § 36; and in Scotland by 3 & 4 Vict. c. 74.

A convention between Britain and France, August 2, 1839, provides, that the subjects of each power shall enjoy the exclusive right of fishery within the distance of 3 geographical miles from low-water mark along the whole of their respective coasts; it being understood, however (Art. 9), that upon that part of the coast of France which lies between Cape Carteret and Point Meinga, French subjects shall enjoy the exclusive right of all kinds of fishery within the limits assigned in Art. 1 (according to a chart), for the French oyster-fishery. With respect to bays, the mouths of which exceed 10 miles in width, the limiting 3 miles is to be measured from a straight line drawn from headland to headland. The oyster-fishery beyond the above limits is to be common to the subjects of both countries.

P.

PADDEE, OR PADDY, a term applied to rice in the husk.

PAGODA, the name of numerous gold coins in India. They mostly weigh about 52·85 troy grains, and contain 44·39 troy grains of pure metal, the standard of the Star pagoda, the former integer of account at Madras, and worth 7s. 10d.

PAINTERS' COLOURS. [COLOUR TRADE.]

PAKFONG, a celebrated Chinese alloy, composed of copper, nickel, and zinc.

PALLADIUM, a rare metal obtained by Dr Wollaston from platinum ore. It is hard, of a dull white colour, malleable, and ductile; sp. gr. 11·3. Its properties are not yet fully known.

PALM-OIL, a fatty substance, obtained chiefly from the drupes of the *Elæis Guineensis*, a species of palm common on the western shore of Africa. It has the consistence of honey or butter, a golden yellow colour, the smell of violets, and a sweetish taste. When spoiled it loses its yellow colour and pleasant smell; but when well preserved it keeps several years without becoming rancid. Sp. gr. ·968. It is sometimes counterfeited with hog's lard, coloured with turmeric, and scented with Florentine iris root. Palm-oil is much used by the negroes for anointing the skin and in cooking. It is produced in abundance in the countries adjoining the Guinea coast, particularly near Eboe and Brass in the Delta of the Niger, where, according to Mr Laird, it can be bought for £4 or £5 a-tun. It is collected in gourds, from which it is emptied into trade-puncheons. The quantity imported into Britain, though only 164,700 cwts. in 1831, amounted in 1841 to 394,342 cwts., of which 303,849 cwts. were entered for home consumption, chiefly for the manufacture of toilet soap, pomade, and perfumery. It is also used in medicine and surgery. [NIGRITIA. OIL.]

PAOLO, OR PAUL, a small Italian silver coin, value 5d. sterling.

PAPAL STATES. [ROMAN STATES.]

PAPER (Du. Fr. & Ger. *Papier*. It. *Carta*. Sp. & Por. *Papel*. Rus. *Bumaga*). Writing materials were anciently formed of palm-leaves, inner bark, skins, waxed tablets, and particularly of Egyptian papyrus,—several of the leaves or other substances being generally sewed together and wound on a centre stick. But these materials are now almost entirely superseded by paper made of vegetable fibre, reduced in water to a pulp. This art is said to have originated in China about A. D. 95; and to have been known in the seventh century to the Arabians, by whom it was carried in the ninth or tenth century to Spain; from whence, or, as some contend, by way of Greece, it was gradually diffused throughout Europe. It was introduced into England in the sixteenth century; but scarcely any, except wrapping-paper, was made before the Revolution, though the manufacture afterwards advanced so rapidly that by 1760 Britain was almost wholly independent of foreign supply. The vegetable substance preferred is linen, owing to the toughness and fineness of its fibre; the best kinds of linen cloth or rags [RAGS] being used for writing-paper of the first quality: for printing-paper linen and cotton rags are employed; and many kinds of coarse paper are made from hempen rags, cotton waste, refuse of flax-mills, old cordage, and tarred ropes. Paper was entirely hand-made until about 1803; but, except some writing-paper, all kinds are now manufactured by a machine, then introduced by Messrs Fourdrinier and Donkin,—a contrivance which, with the improvements since communicated to it by others—principally Mr Dickinson—is justly regarded as one of the most ingenious and beautiful in the whole range of mechanical invention.

MANUFACTURE.—The rags are first separated from threads and buttons, cut, assorted, boiled with an alkali, and afterwards washed; then, immersed in water, they are reduced by a cylindrical engine into pulp or *stuff*, and afterwards bleached by chlorine; next, the pulp is further bruised, and conducted to a vat wherein the fibrous matter is kept in suspension by agitation; and in this state, after being strained to exclude knots, it is received upon an endless web of wire-gauze, having a lateral as well as a progressive movement, so regulated as to spread the pulp equally, determine its thickness, and facilitate the draining of the water. The pulp, becoming solid as it advances, is then projected through felt rollers, by which it is compressed and still further separated from moisture; next, passing over heated rollers, it is dried; and, lastly, the filaments being now felted into a strongly coherent paste, it is wound upon a reel as paper,—a process completed in less than two minutes after it is drawn from the vat: the paper is then cut by a machine into sheets and calendered. This terminates the operations for printing and wrapping papers, which are only "engine-sized," by the addition of rosin and soda to the pulp-vat; but writing paper, before being wound upon the reel, is conducted from the heated rollers through a solution of glue; after which it is pressed and dried, and then cut and calendered as before: writing paper is thus sized or varnished more highly than other kinds, in order that the ink may not spread by capillary attraction.

Hand-made paper is formed from pulp bruised with a much blunter engine than that necessary for the machine; and each sheet is made separately in a wooden frame, with a wire-cloth bottom, into which the pulp is lifted, and the water shaken out; the sheets are then piled between slips of felt, and the superfluous water pressed out; next, they are separated from the felt and subjected to the vat-press; and then dried, sized in a tub, again pressed, and finished. By this careful preparation of each sheet, and especially by the fibre being preserved more entire in the bruising, an advantage is given to the hand-made over the machine paper in firmness and quality. The latter, however, being produced in webs of any desired breadth, is alone adapted for paper-hangings and large newspaper sheets; it besides has the advantage of cheapness; while, owing to successive improvements, the difference of quality, yearly diminishing, is now scarcely perceptible.

Paper, both hand-made and machine, after being manufactured, is examined to remove specks and lay aside damaged sheets; it is then counted into quires of 24 sheets, and folded; and, lastly, packed in reams of 20 quires, pressed, and tied up in a wrapper for sale.

QUALITIES AND SIZES.—Writing and drawing papers, besides the differences already noticed, are principally distinguished as *laid* (all hand-made) and *wove*; the former exhibiting the lined watermarks, derived from the wire-work of the mould whereon they are made; while the latter are perfectly smooth, in consequence of their mould being constructed of a very fine copper wire, woven into a sort of cloth. A difference of colour is observable in writing paper; the yellow is nearly the colour of the rags, but the blue tint is imparted by the mixture of smalts with the pulp. The general terms by which the qualities (independently of the sizes) of writing paper are known, are laid, yellow-wove, and blue-wove. The following is the usual range of sizes of papers:—

Writing and Drawing Papers.—Pot, 15½ by 12½; foolscap, 16½ by 13¼; small post, 20 by 15¼; large post, 21 by 16½; demy, 20 by 15½; medium, 22 by 17; royal, 24 by 19; super-royal, 27 by 19; imperial, 29 by 21; elephant, 28 by 23; Colombier, 34 by 23; Atlas, 33 by 26; double elephant, 40 by 26; and antiquarian, 52 by 30. The common letter paper of the shops is seldom of the size in which the sheets are made; these being generally halved, folded, and the edges smoothed.

Printing Papers.—Double foolscap, 27 inches by 17½; demy, 22½ by 17¾; royal, 25¼ by 20⅜: extra royal, 27½ by 20⅜; crown, 20¾ by 17¼; post and half, 24 by 19½.

Paper-making is carried on extensively in the United Kingdom, chiefly in Kent (the chalky streams of which are said to be favourable to the manufacture), the country around London, Lancashire, Yorkshire, and Durham; in the vicinities of Edinburgh and Glasgow; and in the "Collection" of Naas in Kildare; and the number of mills, in 1839, was 512; whereof 411 were in England, 47 in Scotland, and 54 in Ireland; each paying an annual license costing £4. An excise on paper was first levied in Britain in 1711 (10 Anne, c. 19); which, after many fluctuations, was fixed, in 1803 (43 Geo. III. c. 69), at 3d. per lb. on first class paper, and 1½d. per lb. on second class, "made of old ropes or cordage only." In Ireland, the duties, first levied in 1798 (by a license upon the engine, according to the contents of the vat), were assimilated to the preceding in 1824. The high duty on the first class, and the inconveniences, evasions, and frauds, attending the other regulations, were long the subject of complaint. At length, on the recommendation of the Fourteenth Report of the Commissioners of Excise Inquiry, the duty was, by 6 & 7 Wm. IV. c. 52, imposed at a uniform rate of 1½d. per lb. on all classes, after 10th October 1836. This change has led to a considerable increase of trade, and has been otherwise highly beneficial. In 1835, the quantity charged with duty was, in England, 64,899,901 lbs.; in Scotland, 12,015,059 lbs.; and in Ireland, 2,702,352 lbs.; total, 79,617,312 lbs.: the net produce of duty being £796,305. But, in 1841, the quantity charged was, in England, 76,292,724 lbs.; in Scotland, 16,821,354 lbs.; and in Ireland, 3,991,472 lbs.; total, 97,105,550 lbs.: yielding, of net duty, £587,380; the quantity having thus increased 22 per cent., while the revenue has only fallen off 26 per cent.

The paper consumed in the United Kingdom is entirely of home manufacture, except small quantities of engraving or drawing paper, and of paper-hangings imported from France. But notwithstanding the unrivalled quality of British paper, and our possession of many advantages as to capital and improved machinery, the exportations, which, including stationery of all kinds, amounted in 1840 to £282,403, are nearly confined to our own colonies and foreign dependencies. Except some printing paper to America, very little is sent elsewhere,—a circumstance mainly attributable to the fact, that the manufacture, requiring no great capital, is pursued in most foreign countries, who again generally impose heavy duties upon the introduction of all papers which compete with their own. Besides, the foreign article, though mostly of low quality, is made at a cheap rate, particularly in Germany, from whence large quantities are shipped to South America and other places. In India, Chinese paper is extensively imported for common purposes.

CHIEF PROVISIONS OF THE PAPER DUTY CONSOLIDATION ACT, 2 & 3 VICT. c. 23 (July 19, 1839).

Duty of 1½d. per lb. avoird. imposed on all kinds of paper and pasteboard made in U. K.; which, however, is to be drawn back, *1st*, On all glazed or press papers *bona fide* used in pressing woollen cloths and stuffs; *2d*, On paper used in printing bibles, psalm and prayer books, or books in Latin, Greek, or Oriental languages within the Universities; *3d*, On all paper, pasteboard, printed books in complete sets (except bibles, &c., as above), or account-books, exported as merchandise; and, *4th*, On stained, printed, or painted paper exported; on the last, the drawback to be computed at 2d. per 12 square yards (§ 1).

Duties and drawbacks to be under excise (§ 2).

Paper-making premises to be entered at excise, and inspected by officers (§ 3-7).

Every person intending to export, to give 12 hours' notice thereof to excise, specifying time and place, when and where, and the person on whose account the paper, board, or books, is or are intended to be packed; and officer shall weigh and take account of same (§ 52).

Such package and £200 to be forfeited if any heavy substance or other matter be introduced therein, except paper, board, or books, or materials necessary in packing; or any device used to hinder or deceive the officer from, or in taking a true account of the package (§ 53). [By excise order, October 31, 1839, no "objection made to introduction of other articles of stationery, or of books not entitled to drawback: provided, in the former case, the quantity shall not exceed in weight ⅛th that of the paper, and in the latter case, $\frac{1}{10}$th of the books entitled to drawback in the package; and provided the exporter shall mark on the outside of each package, in presence of the packing-officer, the net weight of the paper of books entitled to drawback; or paper and books, the net weight of each: and the net weight of the articles or books not entitled to drawback, packed with them; and the tare of the package."]

Penalty of £100, and of the package, for the opening thereof, after it is closed, or wilfully defacing or altering the marks thereon (§ 54).

Exporters to give a shipping notice, and enter into security (§ 55).

Packages to be produced to customs officer, who shall see them shipped. A debenture for payment of drawback to be issued in six weeks from shipment (§ 56).

Any stationer intending to cut, gild, colour, or otherwise prepare paper before exportation, to give notice thereof to excise; and no paper so prepared to be packed for exportation on drawback, which shall not be produced in wrappers having the labels thereof so marked by the officer as aforesaid (§ 61).

Penalty of £200, &c. for fraudulently obtaining, or endeavouring to obtain drawbacks (§ 62).

Allowance of duty to be made on paper lost by fire or wreck (§§ 63, 64).

The other provisions chiefly relate to the mode of making up, tying, and weighing the paper, and to other regulations affecting the manufacture, which, as copies of the act are doubtless possessed by all paper-makers, it is unnecessary to notice in this place.

PAPER-HANGINGS, paper stained or printed with some design, in order to be pasted on the walls of a room. They are usually made in pieces 12 yards in length, and about 21 inches in breadth. There are many varieties. Besides common and striped papers, some have a glossy or "satin" ground; others, called "flock papers," have a portion of the pattern somewhat resembling woollen cloth. Ornaments are frequently applied with bronze or imitation gold-powder; while, in expensive kinds, leaf-gold or silver is occasionally used. The papers are commonly printed with size-colours, but some, to bear washing or cleaning, are stained with such as are mixed with oil or varnish. The reduction of the paper-duty, mentioned above, and the abolition of the additional duty on hangings of 1¾d. per square yard, have led of late years to a great reduction in their price, and extension in their consumption. They can now be procured so low as 10d. per piece. The patterns have also been greatly improved; though some of the more tasteful designs are still imported from France.

PAPIER-MÂCHÉ MANUFACTURES are properly composed of paper-pulp boiled in a solution of gum or size to give it tenacity, and then pressed into moulds; though the term is likewise applied to trays, snuff-boxes, and other things made by glueing different plies of paper together, and then varnishing. A great variety of articles are now made at Birmingham of papier-mâché; which, from its lightness and cheapness, has also been of late extensively used in the decorative work of picture and mirror frames, and walls and ceilings, especially those of steam-boat cabins and public buildings.

PARAGUAY, an inland S. American state, bounded N. and E. by Brazil, and S. and W. by the Argentine Republic. Area, 90,000 sq. miles; pop. 350,000. The capital is Assumption, in lat. 25° 16′ S., and long. 57° 37′ W.; pop. 12,000. This state formed, until 1808, one of the provinces of the Spanish viceroyalty of Buenos Ayres: the troubles which broke out at that period were artfully turned to account by Dr Francia, a native lawyer, who in 1814 became dictator of the new state.

Paraguay is generally level, and abounds with numerous tributaries of the Plata, which, in the rainy season, overflow their banks and inundate the adjacent country. It is highly fertile. The most remarkable production is MATE YERBA, or PARAGUAY TEA, which is sent to Buenos Ayres, and consumed in enormous quantities throughout the whole of the states of the Plata, Chili, and Peru. The other productions are chiefly hides, tobacco, sugar, wood, drugs, honey, and wax. Ships may ascend the Plata as far as Assumption, although 1000 miles from its mouth; but the late dictator Francia so successfully discouraged foreign intercourse, that commerce is now almost annihilated. Prior to his tyrannical administration, the annual exports are stated to have been, Yerba, 300,000 arrobas, value $1,080,000; tobacco, $360,000; wool, $225,000; sugar, spirits, sweetmeats, tanned hides, cigars, cotton, cloth, &c., $150,000; total, $1,815,000, or £363,000. The public revenue of Paraguay under the old regime was £75,000. Messrs Robertson estimated Francia's annual expenditure (including the maintenance of 4000 troops), at £117,000. (*Francia's Reign of Terror*, p. 216-221.)

PARCHMENT, the prepared skin of the sheep or goat, was anciently much used as a substitute for paper, and is still, along with VELLUM, employed for charters and other writings, for which great durability is desirable.

PAREIRA-BRAVA, a medicinal root procured from the *Cissampelos Pareira*, a native of the West Indies and South America.

PARIS PLASTER, a paste made from gypsum or selenite, so called from being prepared in large quantities from extensive strata at Montmartre, near Paris. It is employed for taking impressions from moulds, and for making statues. Mixed with lime, it is called *stucco*, and is formed into cornices and ornaments for ceilings.

PARMA, DUCHY OF, an inland state in N. Italy, lying between the Apennines and the Po, by which river it is separated on the N. from Lombardy. Area, 2280 sq. miles. Population, 476,000. Government, an unlimited monarchy, without a charter or any representative assemblies.

About one-third of the duchy consists of a barren mountain region, the inhabitants of which derive their chief subsistence from the forests of chestnut trees with which it is clothed: the remainder, embracing the low hills and plains stretching from the Apennines to the Po, is fertile, well cultivated, and populous; the lands having a regular system of artificial irrigation as in Piedmont. The pasture grounds are very rich, and support numbers of horned cattle, many of which are exported. Besides these, the exports embrace corn, silk, iron, a little wine, marble, timber, and sulphur matches.

The silk braccio = 23·40 Imp. inches; and the cloth braccio = 25·35 Imp. miles. The biolca, land-measure, of 6 tari = ¾ Imp. acre nearly. ·The stajo, grain measure, of 16 quarterole = 1·413 Imp. bushel. The rubbio of 25 lbs. = 18·08 lbs. avoirdupois.

Accounts are stated in lire of 20 soldi. The Parma lira = 2¼d. nearly. In 1833, the national revenue amounted to £275,834; and the debt to £426,000.

PARSNIP (*Pastinaca Sativa*), a biennial British plant, common in calcareous soils, and used chiefly as a vegetable. It is next in value to white-beet, as a saccharine root, containing 9 per cent. of sugar. An ardent spirit of excellent quality is obtained from it; and parsnip-wine (*Vide* Mr Roberts' British Wine-Maker), is said to possess a finer flavour than that obtained from any other British produce.

PARTNERSHIP is a contract by which two or more persons agree to bring together certain articles of property, or valuable acts of service, uniting the commercial proceeds in a common fund, divisible according to some particular rate among the partners. One may bring money, another may bring his industry, a third may bring professional talent, and a fourth, perhaps, his mere name and influence in society, as their respective contributions to the common stock; the pecuniary results of which may be distributed among these partners in proportions of corresponding variety. The position of a partner being, as between the parties themselves, beneficiary, will require something more to prove it than the mere consent of the individual. As respects third parties, however, the partner's condition being onerous, there are acts of his own which will be sufficient to place him in that position; hence arises the natural division of the law of partnership into the obligations of partners to each other, and the obligations of partners to the public.

Obligations between the Partners.—All persons free to contract may enter into partnership with each other for any lawful purpose; and it may be formed either by a regular contract, or by the mere act of mutual trading. In the former case, the contract rules all transactions. A majority cannot alter it, or go beyond its limits, against the will of the minority, unless it be part of the agreement that a majority may bind the whole. There is a choice of persons in a partnership, and so a majority cannot force a new partner on the minority. The executors of a deceased partner are not allowed to occupy his place, unless there be a stipulation to that effect in the contract. The nature of the partnership, however, may be such, that, instead of there being a choice of persons, any one who performs certain conditions is entitled to be a member, as in the formation of a joint-stock company, where scrip is publicly sold. The respective amounts of profit and loss accruing to the partners will generally be provided for by the deed of partnership. Where there is no deed, or no provision on the subject, equality is presumed. The partnership is considered in law a distinct person from the individuals forming it. The property which each individual brings into the concern, becomes the property of the company, and ceases to be that of the individual. When there is capital embarked in the concern by one party, and not by others, it will almost always be the case that the prospective right of property in the stock, as distinct from the profits, will be fixed by agreement; and the cases where this has not taken place are so few that the law is not very distinct on the point. In one class of partnerships only—adventures, does there appear to be a general rule, which is, that, "if a person agree to be interested in the profit and loss of an adventure, this agreement alone will not constitute him a partner in the goods which are the subject-matter of the adventure." (*Collyer*, 107.)

An individual partner may buy or borrow from the firm, and the firm may do so from him. The partners are individually bound to the company as its accredited agents, in which capacity they are not allowed to entertain a separate interest from it, by secretly carrying on the business for which the partnership was established, or by using the knowledge acquired in its affairs to the purpose of competing with the partnership in purchases, &c. Any advantages that may happen to be so acquired by individual partners are generally adjudged to be held by them in trust for the company. The partnership has a claim upon the time and attention of each partner, either in terms of the agreement, or in accordance with the circumstances, where there is no special provision. The position in which the person was placed before the partnership commenced, will affect such a question; thus, professional manufacturers entering into partnership with an attorney in good practice, whom they know to be fully occupied with his profession, would undoubtedly not be entitled to insist on his bestowing the same attention on the manufacturing business as themselves. A partner entitled to share in the profits, is not, without express stipulation, entitled to special remuneration for any amount of attention which he may bestow on the business of the establishment.

If the partners differ with each other on points such as those just discussed, the courts will not, in any ordinary case, interfere to settle the accounts between them without a dissolution. Where there are articles of partnership, there is a remedy in the courts of common law in England, and the Court of Session in Scotland, for breach of performance of the stipulations. Where there are no articles, the remedy, by account between the partners, can, in England, only be had in the courts of equity. Where an account has been taken and a balance struck, a partner may sue at law for what appears due to him on that balance; and he may so sue for cash advanced by him to his partner before the partnership.

Obligations to the Public.—We now come to consider the manner in which persons become liable to the public as partners. A man becomes a partner by allowing the world in general to presume that he is one: as, by having his name on the sign of a shop, or on the bills of parcels, invoices, or accounts, or by putting his name to the negotiable instruments drawn on the firm. Where there are such manifestations of partnership, the party continues to be liable, though notice of dissolution should be given in the Gazette; and it is even said, that he will be liable though the person claiming against him was ignorant at the time when he contracted of the circumstances so inferring liability, and was not induced to contract with the firm by the belief that such a person was liable as a partner for its engagements. Where A took a promissory note from a firm, B stating that he had retired from the firm, but that it had been stipulated that his name should remain in it for some days, within which days the note was drawn, B was held liable (Brown *v.* Leonard, 2 *Chitty*, 120). A person will not continue liable, however, for the remissness of his partners in neglecting to disconnect his name with the company, if he has not given his consent to its remaining, and if he has taken all proper steps to give notice to all concerned. This is generally accomplished by advertisement in the Gazette, and by special notice to the parties with whom the firm has dealings. But there may be circumstantial notice, which a party will have to disregard at his own peril; as where there is a change in the wording of the checks, bills, invoices, &c. The advertisement in the Gazette is sufficient notice to all who have not had dealings with the concern.

Persons intending to agree for a share of the profits as the remuneration of labour, generally involve themselves in the liability of a partner. "If a person agree to pay another, for his labour in a concern, a given sum, in proportion to a given quantum of the profits, it has been considered to be settled that this does not constitute a partnership as to third persons; but that it does constitute a partnership if he have a specific interest in the profits themselves, as profits" (*Montague*, 10). An agreement that a broker shall have for his profit whatever he can obtain upon the sales above a certain sum, does not constitute partnership; but one coal-dealer having agreed with another to bring customers to the concern, receiving in return an annuity and 2s. for every chaldron sold, was held a partner, she having allowed her name to be used (Young *v.* Mrs Axtell, cited 2 *Hy. Blackst.* 242). If the company be accommodated with money, the interest or return for which rises and falls with the profit, it will undoubtedly make the lender a partner. In short, it may be safely taken as a rule, that where any one has an interest in a concern, the extent of which is solely measured by the result of the transactions of that concern, he is liable to the world as a partner. When the circumstances on their original merits are sufficient to found such responsibility, it will not affect the matter that the individuals have otherwise arranged with each other, or even that third parties were ignorant of the responsibility of an implied partner, and dealt without regard to his credit.

Each partner is liable, to the full extent of all he possesses, for the general obligations of the company, and each is its accredited representative, entitled, like an agent, to bind it to all suitable obligations. In England, a partner can only engage the company in simple contracts; he cannot bind it by deed, unless he be expressly empowered by deed to do so. In Scotland, the distinction between simple contract and deed does not exist; but in practice, from the simply administratorial nature of the acts which may be transacted by individuals, the law is very nearly identical with that of England. "Although," says Professor Bell, "a partner be thus empowered by implied mandate to bind the company and his copartners in acts of ordinary administration, and in the usual course of trade, he holds no such power to bind in extraordinary acts out of the usual course. Thus, a reference to arbitration will not bind the company, if signed or agreed to by one of the partners, unless expressly agreed to or homologated by the rest, or by the company" (*Com.* ii. 618). The engagements which a single partner can bind the company to, must be acts of administration naturally connected with the business of the partnership. A reference to arbitration and a guarantee are out of the ordinary course of business, and would require special authority; but a partner may pledge the goods belonging to the company. The transaction does not require to be strictly confined to the line of trade, as defined in the articles of partnership. The powers of individuals may there, it is true, be limited; but the public, not aware of the limitation, are not bound by it, and, when they see a partner ready to transact in the name of the firm such operations as it is natural that he would have to transact in the course of the business for which the company exists, they are entitled to place faith in him. Negotiable instruments are presumed to be in the way of business of every description of commercial partnership, and so each partner is entitled to draw, accept, and indorse bills and notes for the company. If a bill be drawn on the partnership, by its usual collective name, and be simply accepted by one member signing his own name, he will bind the whole. But it is essential to this species of obligation, as to others, that it have the appearance of being contracted for the behoof of the firm, and in the course of its legitimate business. In partnerships purely commercial, the presumption will always be in its favour; but it is otherwise in farming and mining speculations; the presumption here is *against* the negotiable instrument being in the usual course of the business of the firm, but it may still be *proved* to be so. In a partnership where no capital is required, it is clear that one partner cannot bind the others in negotiable instruments.

A partner being in the eye of the law the agent of the company, many analogies may be drawn to illustrate his powers, from the authority of agents to bind their principals in the course of ordinary transactions; and it may be inferred, that where the partner exceeds his proper power, the firm, or another partner, as the case may be, may adopt the act as a principal does that of his agent. [PRINCIPAL AND AGENT.] The obligation having been incurred by the partner in the name of the firm, and being within his express or implied authority, his subsequent fraudulent application of the consideration to his own use will not affect the responsibility. Thus, where a partner bought for the company, who were harness-makers, a number of bits for bridles, and immediately pawned them for his own use, the other partners in vain endeavoured to defend themselves on the plea that the articles had never gone into the company's stock, and that the transaction was a simple fraud by one of the partners (Bond *v.* Gibson and Jephson, 1 *Camp.* 185). If the person dealing with the partner, however, be accessory to the fraud, or if he know or suspect that a fraud is to be committed, or if he be placed in a situation in which a man of ordinary discernment ought to know or suspect that the partner is exceeding the limits of his authority, the other partners will not be liable. Where an individual takes from a partner a security in name of the firm, for a debt due by the individual partner, fraud or such negligence as will free the other partners is always presumed, subject of course to proof on the part of the creditor that he had every reason to believe that the partner acted within his authority. Where a debt incurred for the partner himself, but in the name of the firm, is liquidated by such a security, the presumption is against the other partners. Negotiable instruments bearing the partnership name, though obtained by collusion with an individual partner, are good against the others in the hands of onerous and *bona fide* holders. [BILL OF EXCHANGE.]

As a counterpart to the power of the individual members to bind the company, those who contract with such individuals will in similar circumstances be bound *to* the company. Thus, where a member sells partnership goods, though in his own name, the company may sue for the price. They cannot, however, make the third party suffer for the fraud of the partner; and so, if the purchaser was creditor of the partner at the time of the purchase, he is allowed to set off the two sums against each other; for the chance of set-off may have been the inducement to the bargain. It is a general doctrine that the rights of the firm against third parties may be released by any one of its members, and payment to one is in all cases payment to the whole, unless there be fraud committed and connived at by the payer.

Dissolution.—A limit to the partnership may be fixed in the articles, and if not definitively fixed, may be deduced from circumstances. A partnership is not, however, dissolved by the mere expiry of its period of continuance, it is merely then terminable; and if the parties continue to transact business as usual, an indefinite partnership is entered on. A partnership may be dissolved before the arrival of the period to which its duration is fixed, on just cause, such as, that the object of the association is impracticable, or that the farther pursuit of it would be attended with inevitable loss, or that one of the partners has become insane. Such remedy will be given on the application of a portion of the partners, by the courts of equity in England or the Court of Session in Scotland. When all the partners agree, the company may of course be at any time dissolved, notwithstanding any previous stipulation to the contrary. A partnership at will, or without any specified limit, may be dissolved at the pleasure of any one partner. But a partner is not entitled suddenly to dissolve the connexion for the purpose of taking his colleagues by surprise, and immediately pursuing the partnership business for his own advantage. Where a partner attempts such a project, he will have to communicate the advantage to his colleagues, as where one partner obtained a renewal of the lease of the company's premises, without warning the others of his intention to apply for it (Featherstonhaugh *v.* Fenwick, 17 *Vesey*, 298). The death of a partner operates as a dissolution, unless it be stipulated that his representatives are to succeed to him, in which case the obligation is a right in which they represent their predecessor. In England, an adjudication in bankruptcy against a partner, and the marriage of a female partner, dissolve partnership. In Scotland, it is held that, "1*st*, The marriage of a female partner of a company seems a change so important that it should form a ground for dissolving the partnership. 2*d*, Incapacity may be by bankruptcy or disease. Insolvency of a partner does not alone dissolve a partnership. It does not operate as a transfer, nor tie up the hands of the partner. Neither has bankruptcy under the Act 1696, c. 5, any effect of this sort; and it may be doubted whether it would dissolve a partnership. But bankruptcy by sequestration, which transfers to the creditors all the partners' rights, will unquestionably have this effect. So it would appear would a trust-deed for the benefit of creditors." (*Bell's Com.* ii. 634.)

Bankruptcy.—There is a considerable difference between the practice of those parts of the empire which follow the law of England, and the practice in Scotland, as to the distribution of the estate, where both the firm and individual partners become bankrupt. According to the former, the partnership estate and the individual estates are separated from each other, each becoming liable for its own debts in the first place. The joint estate is first applied to the payment of the partnership creditors, the surplus only going to the creditors of the separate estates; and the separate estates are first applied to the respective separate debts, the surplus only going to the creditors of the joint estate. "In Scotland, the creditors of a company have set apart, as held in trust exclusively for them, the partnership estate, for payment of their debts against the company; and they have a right to be ranked as creditors, for the balance unpaid, on the private estate of the partners" (*Bell's Com.* ii. 660). To the English rule there are exceptions. A joint creditor, who is the petitioning creditor in a separate *fiat*, may prove against the separate estate, and so may a joint creditor, where there is *no* joint estate whatever, and no solvent partner to meet the responsibilities of the company. Where a partner becomes bankrupt, the assignee (in Scotland the trustee) takes his place as a member of the partnership, for the purpose of winding up its affairs. The creditors are entitled to the bankrupt's individual share of the property in common, subject to the state of the partnership accounts. No member of the company has any claim on its bankrupt estate until the claims of the joint creditors are satisfied.

After an act of dissolution, a partnership exists only for the purpose of winding up its affairs, by converting the estate with all expedition into money, and dividing the proceeds among the partners. It is often agreed that the business of winding-up is to be transacted by one member of the company, but the partners still continue liable for his transactions with third parties, so far as consistent with the powers which the public may have reason to suppose that he has been intrusted with. Where it is known that the partnership is dissolved, such a person will not be entitled to pledge the credit of his copartners to a negotiable instrument. It is one of the privileges of a partner to insist, on occasion of a dissolution, that all the partnership property be brought to public sale. (*Montague on Partnership. Cary on Partnership. Collyer on Partnership. Smith's Mercantile L.*, 18-56. *Bell's Com.* ii. 612-669.) [COMPANY. CORPORATION. JOINT-STOCK.]

PASSENGER. [CUSTOMS. EMIGRATION. SMUGGLING.]

PATENT-LETTERS are those public acts of the crown, which, being patent or open to the public at large, have the great seal appended to them. Corporations are thus constituted, and peerages may be thus conferred. The most important description of letters-patent, however, are those commonly known by the name of patents, in which the crown confers a monopoly in some new invention of a useful manufacture or commodity, on the inventor or those authorized by him. In England, by 21 Jas. I. c. 3, this authority was retained when the power of the crown to grant monopolies in other cases was abolished by act of Parliament, and the practice seems to have been tacitly adopted in Scotland. By that act, the period beyond which the crown cannot grant the privilege is fourteen years; but by a late act a patent may be renewed for seven years.

The procedure commences with a petition, narrating the utility of the invention, and praying for the usual privilege of "the sole working, constructing, making, selling, using, and exercising of the said invention." The parts of the kingdom for which the patent is prayed must be mentioned. One patent will serve (if specially desired) for England and the colonies. The patent states a time within which the "specification," as described below, must be lodged. In practice, two months is the period when the patent is for England only, four months when it is for England and Scotland, and six months when it is for the United Kingdom (*Carpmael on Patents*, 62). The expense of obtaining a patent for England is estimated at £120, for Scotland at £100, and for Ireland at £125, or upwards (*Report of Select Committee on Patents*, 12th June 1829, p. 17).

IN ENGLAND, the petition is accompanied by a declaration before a Master in Chancery, that the petitioner has invented or imported the article. The petition and declaration are lodged at the Home Office; and in a few days the former is returned, with a reference to the Attorney or Solicitor General. It is in the option of the applicant to lay it before either of these officers. The clerk of the law-officer searches his books for a caveat that may affect the petition, and if he find one, gives notice to the party who entered it, who has a week to give notice of opposition. The law-officer hears parties and reports. This report receives the royal warrant at the Home Office, directing a bill to be prepared for the royal signature. The warrant is then taken to the Patent Office, where again it may be opposed on a caveat. If the law-officer decide in favour of the applicant, he signs the bill, which then goes to the Signet Office, where it receives a warrant called a signet bill, and passes to the Privy Seal. A Privy Seal warrant, or Privy Seal bill, authorizing the appending of the Great Seal, is granted, and coming then before the Lord Chancellor, it may be opposed for the last time. Here the letters-patent are made out and sealed with the Great Seal.

IN SCOTLAND, the declaration is made before a Justice of the Peace, the petition and declaration are referred to the Lord Advocate, a Queen's warrant is granted, and the seal appointed by the Treaty of Union as a substitute for the Great Seal is appended.

IN IRELAND, the petition and declaration are referred to the Lord-Lieutenant, a Queen's letter is granted on his report, and the Great Seal of Ireland is appended. (COMMENTARY ON THE LAW OF PATENTS.)

Caveat.—Any one fearing that his invention may be anticipated before he is ready to apply for a patent, may lodge a "*caveat*" with the law-officers of the crown. This is a request that notice may be given to the person who enters it, if application be made for a patent on the subject of an invention which he describes in general terms. The caveat secures no monopoly or exclusive right against the *public;* its sole effect is against any other person's right to obtain a *patent* for the invention. If any person, therefore, makes and vends the commodity in the mean time, the caveat becomes useless, for neither the inventor nor any other person can obtain a patent.

When a caveat is lodged, if any person applies for a patent relating to the same subject, the lodger receives notice, and has seven days for deciding whether he shall oppose the application. If he oppose, both parties are heard by the law-officer of the crown. If the inventions are different, each may obtain a patent. If both have made the same invention, neither can obtain one. If the one has borrowed from the other, however, the original inventor will undoubtedly be entitled to the patent. A caveat expires in a year, but may be renewed.

Prolongation of a patent for seven years, after the expiry of the original fourteen, may be granted in terms of the act 5 & 6 Wm. IV. c. 83. The applicant publishes his intention to apply for the prolongation to her majesty in council, by advertisement thrice in the London Gazette, in three London papers, and thrice in a local paper—where his manufacture is carried on, or (if he carry on none) where he resides. He then petitions the council. A *caveat* may be lodged against the prolongation. The judicial committee, hearing parties, and examining witnesses, report whether the prolongation should be granted or not. These proceedings must all be followed out before the original period of fourteen years expires.

The Invention.—It is a requisite that the invention be complete of its kind, constituting when embodied a vendible article. The discovery of a mere *principle* cannot be protected,—a practical result in the form of an article of commerce must be shown. The *invention* must have been made by the claimant of the patent, or must have been introduced by him from a foreign country. It must not have been *used* before, or employed as an article of trade or manufacture, either by the petitioner or any other person. Use in one of the divisions of the United Kingdom will not invalidate a patent for any other part, if obtained by the original inventor or importer from abroad. By 5 & 6 Wm. IV. c. 83, provision is made for protecting parties from the consequences of immaterial and nominal adoptions of previous inventions.

The Title under which the patent is petitioned for is an object of importance, as it is by its applicability to the invention that the lodger of a caveat knows whether the application will interfere with himself or not. It must convey an idea of what has been invented, but of nothing more. Thus, Lord Cochrane's patent for naphtha-lamps was found void, because it was called "a method or methods of more completely lighting cities, towns, and villages;" whereas, though it was only for such a purpose that his invention could apparently be used, from the noxious nature of the materials, the invention was after all but a lamp suitable for the purpose of burning naphtha, and should, it was said, be called so (Cochrane *v.* Smethurst, 1 *Stark.* 205). The title must not contain more uses for the commodity than those which it is adapted to; so Felton's patent in 1827, for "a machine for an expeditious and correct mode of giving a fine edge to knives, razors, scissors, and other cutting instruments," was held bad, because the machine described would not sharpen scissors. (*Holroyd on Patents*, 94.)

The Specification or description of the invention enrolled by the patentee requires peculiar attention. "The invention must be accurately ascertained and particularly described: it must be set forth in the most minute detail. The disclosure of the secret is considered as the *price* which the patentee pays for this limited monopoly, and therefore it ought to be full and correct, in order that the subject of his patent may at its expiration be well known, and that the public may reap from it the same advantages as have accrued to him (*Godson on Patents*, 106-7). On the proper characteristics of the specification, Mr Godson farther says, (p. 118), "It is a *fundamental rule*, on which all others for making and judging of a specification depend, that the secret must be disclosed and the invention described in such a manner that men of *common understanding*, with a *moderate knowledge* of the art, may be enabled to make the subject of the patent.

"The description must be *confined* to the manufacture, that the novelty may be known. Extraneous matter, however learned, must not be introduced to darken it. Though it is addressed to the public in general, it need not be so circumstantial, or so explanatory, that persons entirely ignorant of the science from which the subject is taken may thereby alone be able to learn and use the invention. Nor, on the other hand, should the description be so concise as to become obscure."

If things are described as being used to produce the effect, which really have not been used, they are presumed to be stated for the purpose of misleading, and will have the effect of destroying the patent. Such also is the effect of any attempt to conceal the use of known materials by an obscure method of describing them, or by a technical description of the method in which they are formed, such as to make that appear part of the invention. (Savory *v.* Price, 1 *R. & M.* 1.)

Improvements.—Where an improvement merely has been invented, care must be taken not to make the terms of the specification such that a reader may be led to infer that a part of the commodity, well known before, has been invented by the patentee. Mr Godson lays down these modes of specification as the best adapted:—

"*First*, By describing the whole manufacture, and then particularizing, with great exactness, the addition of the inventor.

"*Secondly*, By a description of the whole manufacture, pointing out the parts that either are old or not material to the invention.

"*Thirdly*, By giving an accurate and intelligent description of the improvement, and the manner in which it is applied to the subject, or parts that are old.

"*Fourthly*, By describing the whole manufacture, if it be an improvement of another for which a patent has been obtained, taking care to refer in the new specification to that of the former patent." (156-7.)

Amendment.—By 5 & 6 Wm. IV. c. 83, a person who holds a patent may enter an amendment with the clerk of the patents of England, Scotland, or Ireland, with consent of one of the law-officers of the crown. The amendment may extend to "a disclaimer of any part of either the title of the invention or the specification, stating the reason for such disclaimer;" or "a memorandum of any alteration in the said title or specification, not being such disclaimer or such alteration as shall extend the exclusive right granted by the said letters-patent." Such amendment is considered a part of the specification. A caveat may be lodged, giving the party a right to be heard against the amendment before the law-officers. The law-officer may require an advertisement to be made before he grants his consent to the amendment. No amendment can be pleaded in any action pending at the time when it is enrolled.

Extent of the Privilege.—It is a condition in every patent, that the patentee shall not, by assignment or otherwise, extend the privilege to any number of persons exceeding five, or open any books for public subscriptions to raise money for carrying on the operation from persons exceeding that number, and that he shall not presume to act as a corporate body. This does not prevent the patentee from granting licenses to any number of persons to use his patent, provided the consideration they pay be a sum certain, either received in full at the time of granting, or paid periodically. It is when the consideration for the communication of the privilege is connected with the profits, and constitutes a partnership between the patentee and the privileged person, that the above restriction comes into operation.

Except in so far as thus limited, the patentee has full command over his privilege. Whenever it is infringed he can obtain damages. Whether the patent infringed be a valid one will depend on the matters already discussed.

By 5 & 6 Wm. IV. c. 83, when a person is pursued for infringement of patent, if he intend to object to the validity of the patent, he must give notice of his objections; and he can prove no other objections but such as he gives notice of, unless with the discretionary permission of the judge on special cause shown.

The patentee can convey his privilege in full, with his right of action, or he may communicate it by license, or convey a share in it, subject to the limitations noticed above. It is available to creditors on bankruptcy.

By the act of 5 & 6 Wm. IV., whoever, without license of a patentee, imitates his mark or stamp, or by the use of the word "patent," or otherwise, endeavours to make articles pass off as those of the patentee, is liable to forfeit £50 for each offence. The act permits an article, for the making of which a patent has expired, to be marked as "patent."

(*Godson on Patents. Holroyd on Patents. Carpmael on Patents. Webster on Patents. Burton's Manual of the Law of Scotland*, 530-540.)

PAWN, OR PLEDGE, is a contract by which a lender, or other creditor, is put in possession of some article of moveable property, which he retains as a security for the payment of a debt. There are several transactions of this class which can only be legally undertaken with a licensed pawnbroker, and to these cases the statutory regulations abridged below strictly apply. There are certain principles of mercantile law which, however, apply to cases not coming within these regulations.

The person who gives the pledge is called the pawner, and the person who receives it the pawnee. The contract is one of those bailments to which the rules of careful custody apply, and the pawnee is held responsible for *ordinary* care of the pledge deposited with him. [BAILMENT.] If, being of a perishable character, it perish in the course of nature, he is not responsible, and may recover his money. If it is of a nature to be deteriorated by use, as wearing apparel, he is not entitled to the use of it. In the case of an animal which is not deteriorated by use, and the cessation to employ which is a loss of valuable services,—as in the case of a horse or a dog,—it is an understood part of the contract that the pawnee has the use of the pledge. Where there is neither advantage nor disadvantage to the article in using it,—as in the case of jewellery,—it would appear that the pawnee may use the pledge, but that he is absolutely responsible for all damage or loss that may arise from the use. He must give up the pledge on a tender of the debt, and, unless by special contract, there is no time when the pledger cannot redeem. (*Sir E. Tomlins*, voce *Pawn*. *Jones on Bailments*, 75-85.)

PRINCIPAL STATUTORY REGULATIONS AS TO PAWNBROKERS.

By 25 Geo. III. c. 48, and 39 & 40 Geo. III. c. 99, every pawnbroker must take out a stamp-license. Persons who take no higher than 5 per cent. per annum for money lent on pledge, are not to be deemed pawnbrokers. Pawnbrokers must, under a penalty, enter every advance (if exceeding 5s.), with a description of the pledge, the date, and the name and address of the person pawning the goods, and of the owner, in a book, and must copy the entry on the ticket; all advances above 10s. must be entered in a separate book and numbered, the number being marked on the ticket.

The pawnbroker must file a duplicate on a pledge being redeemed, stating his profit. Pawnbrokers receiving in pledge unfinished manufactures or apparel, from the persons to whom they are committed to be finished, forfeit double the sum lent, and must restore the goods. On the declaration of the proprietor of any goods, showing just cause to presume them unlawfully pawned, warrant may be granted by a justice to search for them, by breaking open doors, &c., and to restore them to the owner.

There are provisions authorizing justices to enforce restitution of pledges for loans under £10, on tender of the sum and profits. Where a ticket is destroyed or mislaid, the pawnbroker may be compelled to give the owner a copy of it, with a blank affidavit, which being filled up by a justice, on evidence of ownership and the party's solemn declaration, restores to him the right to redeem the goods.

Where it is proved to a justice that a pawnbroker has embezzled or injured a pledge, or sold it before the proper time, he may award damages.

A pawnbroker not producing his books and papers unmutilated when required by a magistrate, in consequence of any criminal or other question, is liable to a penalty. Pawnbrokers must not take pledges from persons intoxicated, or from children under 12 years of age. There are also other provisions for the prevention of fraudulent pledgings and other offences incident to the nature of the transaction.

Information against pawnbrokers for offences must be given within twelve calendar months.

The following is the rate of profit or interest which pawnbrokers are entitled to charge per calendar month (a charge for one month being due at any time before its expiry, but charges for additional months not commencing until after the expiry of seven days, and being to the extent of only one-half the profit, until after the expiry of the first fourteen days). For 2s. 6d., one halfpenny. For 5s., one penny. For 7s. 6d., three halfpence. For 10s., twopence. For 12s. 6d., twopence halfpenny. For 15s., threepence. For 17s. 6d., threepence halfpenny. For a sum of £1, fourpence; and so on progressively and in proportion for any sum not exceeding 40s. For every sum exceeding 40s. and not exceeding 42s., eightpence; and for every sum exceeding 42s. and not exceeding £10, threepence to every £1, and so on in proportion for any fractional sum. Where any intermediate sum lent on a pledge exceeds 2s. 6d. and does not exceed 40s., a sum of fourpence may be charged in proportion to each £1. Pawnbrokers must expose to sight in their offices tables of these rates, and of the rates charged for tickets as above.

Goods pawned are forfeited on the expiry of a year, exclusive of the day of pawning. But it has been held that the property is not transferred, but that the pawnbroker merely has a right to sell the article; and consequently that, on a claim after this period, with tender of principal and interest, the property must be restored if unsold. (Walter *v.* Smith, 5 *Barn. & Ald.* 439.)

All pledges for sums above 10s. and not more than £10, must be sold by auction, preparatory to which they must be exposed to public view, and advertised according to fixed regulations. Pictures, prints, books, bronzes, statues, busts, carvings in ivory and marble, cameos, intaglios, musical, mathematical, and philosophical instruments, and china, must be sold in sales by themselves, at some one of four periods in the year, viz. on the first Mondays of January, April, July, and October, and following days, with the usual preliminaries, under penalty. If the owner give notice before one witness to a pawnbroker not to sell a pledge at the expiry of a year, it must be kept, liable to the redemption of the owner, for three months additional. Pawnbrokers must keep accounts of such sales in a specified shape, open to any person interested, on payment of a penny. Pawnbrokers must not purchase pledges except at the auctions.

PEAR, the well-known fruit of the *Pyrus communis*, is extensively cultivated in this country, more particularly in Worcestershire, where it is made into perry. "The fruit catalogue of the Horticultural Society contains above 600 varieties of the pear; and it is there observed, that the newly introduced Flemish kinds are of much more importance than the greater part of the sorts which have been hitherto cultivated in Great Britain, and when brought into use, will give quite a new feature to the dessert." (*Veg. Substances*, vol. i. p. 234.) The quantity imported is small. The timber of the pear-tree is light, smooth, and compact, and adapted for carving, for picture-frames, and tool-handles.

PEARL (Fr. & Ger. *Perle*. Arab. *Looloo*. Pers. *Mirwareed*. Cyng. *Mootoo*), a spherical concretion found inside of the shell of the *Concha Margaritifera*, a testaceous fish of the oyster kind. It consists of alternate concentric layers of membrane and carbonate of lime. The best are of a clear bright whiteness, free from spot or stain, with the surface naturally smooth and glossy. The largest are the most valuable. Those of a round form are preferred, but the larger pear-shaped ones are esteemed for ear-rings. *Seed-pearls* are those of the smallest size. The most extensive pearl-fisheries at present are those in the Gulf of Manaar in Ceylon, where the finest are procured, and near Bahrein Island, in the Gulf of Persia. The net revenue derived from the Ceylon fishery for the 9 years prior to 1834, was £145,000; in 1835 it produced £38,000. At Bahrein, the fishery, according to Lieutenant Wellsted, employs in the season about 4300 boats. Pearls are also obtained at the S. extremity of the Indian peninsula, in the Saluk islands, and in other parts of the east. They were also formerly procured in various parts of the New World, but the American fisheries are now of little importance. Pearls are likewise found on the Algerine coast, and in some parts of Europe. In Britain, a coarse kind may be got in some rivers, particularly the Tay, from a large sized muscle (*Unio Margaritifera*). The best pearl-oysters are generally found in water about 7 fathoms deep, and are procured by divers who remain under water scraping them off rocks for 50 or 55 seconds at a time. A diver often brings up in his basket 150 oysters at a dip, but at other times not more than 5. The most valuable on record are, one purchased by Tavernier at Catifa, in Arabia, the diameter of which was rather more than half an inch, the length upwards of two inches, and the price £110,000; and one obtained by Philip II. in 1587, from the island of Margarita, off the Colombian coast, which weighed 250 carats, and was estimated at 150,000 dollars. The value of pearls, however, has now fallen, chiefly owing to the great improvement which has taken place in preparing them artificially. The best imitation ones are perhaps those made by a Frenchman named Jaquin, by covering the inside of hollow glass beads with essence d'orient. Roman pearls are prepared with the purest and finest alabaster.

PEASE (Da. *Ærter*. Du. *Erwten*. Fr. *Pois*. Ger. *Erbsen*. It. *Piselli*. Por. *Ervilhas*. Sp. *Guisantes*), the product of a well-known leguminous plant, of which two species are commonly distinguished in this country,—the gray field pea (*Pisum arvense*), grown extensively in some parts of England, and the only kind raised in fields in Scotland; and the white or yellow pea (*P. Sativum*), the species cultivated in gardens, but which is likewise extensively reared in fields in Middlesex, Kent, and other English counties. Of these two species there are many varieties. The soil best adapted for pease is a light or sandy loam of some depth, and in good heart; but they should not be repeated on the same ground in less than 10 or 12 years. Their produce is very uncertain; none of our cultivated crops presents such frequent failures. According to Professor Low, "30 bushels an acre are held to be a good crop in most districts of this country. Perhaps the average of the kingdom does not exceed 20 bushels an acre." Pease are highly nutritious, and, boiled with some animal fat, make an excellent food for hard-working men. The garden varieties are esteemed as culinary vegetables in their season; the others are extensively used in feeding stock. [Corn.]

PEAT, a kind of fuel, composed chiefly of the decayed fibres of mosses.

PECK, a British corn-measure, containing 2 Imp. gallons, or 9·08 Fr. litres.

PECUL, a Chinese weight equal 133⅓ lbs., but in Java reckoned 136 lbs.

PEDLAR, or HAWKER, an itinerant dealer in small-wares. In England, a pedlar is required (under a penalty of £50), to take out an annual license from the stamp-office, costing £4 if he travel on foot or with horses alone, and £8 if he travels with a horse or other beast bearing or drawing burden. Before receiving a license, the applicant must produce a certificate of character from the parish clergyman and two householders. The words "Licensed Hawker" must be placed conspicuously on his pack, cart, and handbills (50 Geo. III. c. 41, and 1 & 2 Wm. IV. c. 22, § 75). In Scotland, the regulating act is 55 Geo. III. c. 71. A hawker is prohibited, by 48 Geo. III. c. 84, § 7, from selling tea, foreign spirits, tobacco, or snuff.

PELLITORY (*Anthemis Pyrethrum*), a plant cultivated in Germany in Thuringia, and near Magdeburg, for its root, which is used in medicine as a masticatory and stimulant. The root is without smell, and when dry it is some inches long, tough, fibrous, of the thickness of a quill, externally gray, internally white.

PENANG, PULO-PENANG, or PRINCE OF WALES ISLAND, a settlement of the East India Company, on the W. coast of the Malayan Peninsula. Area, 130 sq. miles. Population, 40,000, chiefly Malays and Chinese. Georgetown, the port, pop. 20,000, is situate in lat. 5° 25′ N. and long. 100° 23′ E. A resident is stationed here, subordinate to the one at Singapore.

The greater part of the island is mountainous and steril, or covered with forests. A portion of the south and of the eastern parts is level and cultivated. The seasons are irregular. The wet season is generally from September to November; coldest months, December and January; hottest, June and July. Fahrenheit ranges in Georgetown from 70½ to 90, but considerably lower on the hills. The chief productions are spices, especially pepper and fruits; and the fisheries are extensive. This settlement was formed in 1786; and from its position, salubrity, and the abundance of provisions, was found useful during the war as a place of resort for our shipping: it is at present visited by vessels proceeding from India and Arabia to China. It was formerly an important emporium for the trade with the numerous petty and semi-barbarous states in the Eastern Seas; but of late it has been supplanted by Singapore. It is now chiefly used as an entrepôt for the produce of the countries in its own neighbourhood, in the Malay Peninsula and Sumatra,—the native merchants receiving in exchange British and Indian goods. It is supplied with rice from Bengal, Acheen, and the Queda territory. In the year 1835-36 the imports were valued at £411,769, and the exports at £420,675. For measures, weights, and money, see Malacca.

Opposite to Penang, on the Malay Peninsula, is the British province of Wellesley, extending about 30 miles along the coast, and from 6 to 10 miles inland. Pop. in 1836, 47,555. The sugar-cane is here extensively cultivated by Chinese settlers.

PENCIL MANUFACTURE. The pencils of the finest quality are made from plumbago or black-lead, procured in Borrowdale mine, about nine miles from Keswick, in Cumberland. The produce of this mine, which belongs to a company, is periodically despatched to their warehouse in Essex Street, Strand, London, contiguous to which their "lead sales" are held on the first Monday of every month. The best pencils are cut out by a saw from sound pieces of plumbago, previously calcined in close vessels at a bright red heat. No other lead is considered equal to that of Borrowdale, though its quality is not uniform, but an inferior sort, imported from Mexico and Ceylon, is used for secondary pencils; and more common ones are now largely made from a composition of plumbago powder, lamp-black, and clay. The manufacturers who enjoy the highest reputation are, Banks, Forster, & Co., and Airey, of Keswick; and Mordan & Co., and Brookman & Langdon, of London.

PENNY, the most ancient British coin, was at first composed of silver, and minted with a deep cross. When broken into two parts, each was called a *half-penny*, and when into four, each was called a *fourth-thing*, or farthing. Pennies are still minted in silver, but those in general circulation have been for a long time made of copper. [Coin.]

PENS are either derived from the quills of fowls, or fabricated from steel. Quills fitted for writing may be obtained from many birds, but the best are those of the goose, the only kind used in large quantities. Of these, 5 are obtained from each wing, and 20 may be procured from each bird during the year. They are arranged by the quill-dresser into "Firsts" called *Pinions*, "Seconds," "Thirds" (the largest and most valuable); and the fourth and fifth quills are both known by the name of "Fourths" or "Flags." To remove their membranous skin and natural softness and toughness, so as to fit them for writing, different means are followed in different countries. In Britain they are now generally "dressed" by the process of *duching*, which is performed by introducing the quill for a moment into a redhot earthenware retort, and then passing it quickly between a blunt knife and heated plate, thus hardening it and freeing it from skin. They are then tied up in bundles of 25 each for market. The British and Irish are inferior to those brought from the Continent, especially from Riga and Hamburg. In 1841, the number of foreign quills entered for consumption was, 18,000,000.

Steel-pens were little used until 1830, when their rigidity was modified by Mr Perry, by introducing apertures between the shoulder and the point; other improvements have been since made by him, and by Messrs Mordan, Gillott, and others; and the quantity used in this country is now very considerable, besides which, great numbers are exported. The total quantity of steel employed in this manufacture has been estimated at 120 tons, from which upwards of 200,000,000 pens are produced. One Birmingham manufacturer employed in 1838 no fewer than 300 persons in making steel-pens. They are besides extensively manufactured in London and Sheffield. There are many kinds, but the common "three-slit pen" has long been and still is a favourite. When first introduced, steel-pens were as high as 8s. a-gross; they afterwards fell to 4s., and now they are produced at Birmingham at fourpence a-gross!

PEPPER, a name given to several aromatic berries or fruits extensively used as condiments. Four different kinds are distinguished in commerce: black pepper, long pepper, Cayenne pepper, and Guinea pepper.

Black Pepper (Du. *Peper*. Fr. *Poivre*. Ger. *Schwartze Pfeffer*. It. *Pepe nero*. Por. *Pimenta*. Sp. *Pimienta*. Hind. *Gol-mirch*. Pers. *Tilfil seeah*), the most important of all spices, is the product of a slender climbing-plant or vine (*Piper nigrum*), extensively cultivated in Malabar, in India; Sumatra, particularly the W. coast, and other islands in the Indian Archipelago; Siam, and Malacca. The best is that of Malabar. The plants begin to bear in their fourth year, are prime in their seventh, and gradually decline about their tenth year. Generally, the culture is not difficult, and two crops are yielded annually; but the produce is subject to great fluctuations. The berries are produced in clusters, and are gathered before ripening. They are at first of a bright red colour, but, by drying in the sun, become black and corrugated on the surface: taste, hot and fiery; odour, slightly aromatic. The largest, heaviest, and least shrivelled are the best. Pepper sold ground is sometimes adulterated with the powder of the husks of mustard-seeds, or burnt crusts; and Dr Paris states, that there are artificial berries, which may be detected by their crumbling when immersed in water. "White pepper," the fruit of the same plant, gathered after it is fully ripe, and freed of its dark coat by maceration in water, is smooth on the surface, and milder than black pepper. It is little used.

LONG PEPPER (Fr. *Poivre long*. Ger. *Lange Pfeffer*. It. *Pepe lungo*), is also the product of a climbing-plant (*P. longum*), abundant in the E. Indies. The berries are small, and disposed in short, dense, terminal spikes. They are gathered unripe and dried, when they become of a dark-gray colour. Their odour is faintly aromatic; but in taste they are exceeding hot.

CAYENNE PEPPER (Fr. *Poivre d' Espagne*. Ger. *Spanischer Pfeffer*. It. *Peperone commune*), is a mixture of the powder of the dried pods of different species of *Capsicum*, more especially of the *C. frutescens* [CHILLIES], the *C. annuum*, or Spanish pepper, and the *C. baccatum*, or bird pepper, natives of the East and West Indies and South America. It is brought to England in the state of powder from the West Indies. In taste it is very fiery and acrimonious; its colour is reddish. It is employed in medicine, but is chiefly used as a stimulating condiment, being an essential ingredient in curry-powder.

GUINEA PEPPER consists of the aromatic seeds of two species of Amomum (*A. grana Paradisi*, and *A. grandiflorum*), found on the W. coast of Africa, and imported into Britain from Sierra Leone and other places. They are powerfully stimulant and cordial, and are used for the same purposes as cardamoms.

The trade in the three last is of little importance compared with that in black pepper, which has formed one of the staples of East India commerce from a remote period. This trade has greatly benefited by the opening up of the Company's monopoly; the price in London (in bond) having been reduced from upwards of 1s. per lb. to about 4d. The consumption has also been increased considerably in this country by a reduction of the extravagant duties with which the commodity was burdened during the late war. In 1826, the duty per lb. was lowered from 2s. 6d. to 1s.; and the consumption, which had previously been only about 1,300,000 lbs. a-year, was advanced, in 1834, to 2,457,020 lbs. A further reduction of duty to 6d. per lb. was made in 1837; but this has not been followed by the increase anticipated, the consumption in 1841 not having exceeded 2,750,798 lbs. The imports vary greatly; the amounts in 1838, 1839, 1840, and 1841, having been respectively 3,682,342 lbs., 9,798,059 lbs., 5,927,959 lbs., and 12,928,758 lbs. Excepting small quantities brought direct from Sumatra and other Indian islands, and Western Africa, almost the whole is imported from the territories of the East India Company. The surplus over our own consumption is re-exported to all parts of Europe, the north of Africa, America, and Australia.

Different estimates have been formed as to the extent in which pepper is produced. The latest is probably that furnished, in 1840, by Mr De H. Larpent, chairman of the East India Association, to the Lords' Committee, on the petition of the East India Company. According to that gentleman, "pepper is produced in Sumatra and the Archipelago to the extent of 35,000,000 lbs.; and Malabar, which is our own (supposing India to be all one country), produces from 15,000,000 lbs. to 20,000,000 lbs." (*Par. Paper*, 1840, *No.* 353, *Q.* 403.) [PIMENTO.]

PERMIT—*Excise*. Each statute imposing an excise duty generally specifies a certain limit as to quantity, beyond which the commodity in question cannot be conveyed from place to place without a permit from an officer of excise. The general system of granting permits is regulated by 2 Wm. IV. c. 16. No officer can grant one until a request note be presented to him. The note must be signed by the person desiring the permit, or by his clerk or servant, and must contain the date of requesting, the places from and to which the commodity is to be removed, and the names and designations of the sender and receiver. When the party desiring the permit is not licensed to deal in the commodity, he must satisfy the commissioners of excise, or the collector or supervisor of the district, that all duties have been paid; and, where the goods are not merely transferred to other premises of his own, but are conveyed to another person, he must make a declaration that they have not been sold. Exciseable commodities removed without permit are forfeited, and every person concerned in the removal is liable to a penalty of £200. The permit specifies a time within which it is available, and if not used within that time, it does not protect the goods from seizure on their removal. It is open, however, to prove to the court that the delay was occasioned purely by accident. A permit not used must be returned; and when there is no return, if the officer, on taking an account, find no decrease of stock corresponding to the permit, the difference is forfeited. There can be no action for the price of exciseable commodities delivered without a permit.

PERRY, the fermented juice or wine of the pear. In this country, it is chiefly made in Worcestershire.

PERSIA (Pers. *Iran*), a kingdom in Asia, extending from 26° to 39° N. lat., and from 44° to 62° E. long., and bounded N. by the Russian Empire, Caspian Sea, and Tartary; E. by Afghanistan and Beloochistan; S. by the Persian Gulf; and W. by the Turkish Empire. Area, 450,000 sq. miles. Population vaguely estimated at 9,000,000, composed chiefly of Mohammedans of the Shiite sect. The kingdom is divided into 13 provinces, which are subdivided into districts. Capital, Teheran; pop. 70,000. The government is a military despotism, vested in a sovereign under the title of shah.

The country exhibits great diversities of surface, climate, and productions. Its most remarkable features are its chains of rocky mountains,—its long, arid, riverless valleys,—and still more extensive salt or sandy deserts. In the N. and E. parts it is cold, mountainous, and barren; in the middle parts, sandy and desert; in the W. and S. it is warm and fertile; and "dreariness, solitude, and heat" are, according to Morier, the chief characteristics of the shores of the Persian Gulf. The greater portion is devoted to pasturage, on which are reared horses, sheep, and goats. The horses, stronger and more serviceable than the Arabian, are highly esteemed. The sheep are of the long-tailed species, producing however very fine wool; while that of the goats of Kerman possesses many of the qualities so much esteemed in the Cashmere variety. The fruits are of peculiar excellence; and the wine of Shiraz is celebrated throughout the east. The mulberry also grows in such abundance, especially in the north, as to render silk the great staple of the kingdom. The grains cultivated are chiefly those of Europe. The other vegetable productions are cotton, tobacco, sugar, drugs, and dye-stuffs. The chief mineral products are copper, iron, salt, bitumen, and naphtha.

In former times Persia was distinguished for the manufacture of all the fabrics suited to the ostentatious taste of oriental countries; and these manufactures are, though to a limited extent, still in existence. The other articles made consist chiefly of arms, earthenware, leather, paper, and jewellery.

The commerce of Persia has at no time been considerable. Besides insecurity of property, it has to contend with various natural obstacles,—roads have scarcely ever existed, navigable rivers are unknown, and the seaports are few and unimportant. The only means of transport is on the backs of camels, mules, or small horses; hence the price of all commodities becomes greatly enhanced by the expense of carriage. The principal raw exports are silk, cotton, tobacco, rice and grain, dried fruits, sulphur, horses, wax, and gall-nuts; and the amount of the three first might be greatly extended. Of manufactured goods Persia sends out only a few,—almost entirely to Russia,—consisting of a considerable quantity of silk and cotton stuffs, with some gold and silver brocade. Besides Russia, the principal intercourse is with Turkey, Bagdad, Arabia, the Usbecks and Turkomans on their northern frontier, and India. In dealing with all these countries except the last, the balance of trade is in favour of Persia, and the excess of her exports is returned in bullion (composed of ducats, dollars, German crowns, and silver rubles), which is chiefly transported to India in return for the large surplus produce brought thence annually either by way of Bushire or of Cabul to Herat and Yezd, and destined to supply the countries towards the west. The total imports are said to exceed in value £3,000,000.

British manufactures are sought after to an extent only limited by the means of the purchasers. Regarding English cloth—a leading import—Lieutenant Burnes states:—"When I was in Persia in the end of 1832, the colours most in request were Oxford blue, blue, and brown; next year they may change to red and gray; but it may be remarked that if dark coloured they generally sell best. The outer garment of most respectable persons is made of broadcloth; and a cheap kind that will keep its colour is the best for export. No high-priced goods of any description should ever be sent into these countries." The British trade by way of the Black Sea and the Port of Trebizond, and thence overland by Balbout, Erzeroum and Tabriz, is somewhat on the increase; though cramped by the impoverished state of the people, and by the large increase of the exports of Turkish raw silk from Brusa to England, which checks the trade in Persian silk. The most important part is, however, conducted at Bushire, which, since the decline of Gombroon, has become the chief emporium for the maritime commerce of Persia.

Bushire is situate on the Persian Gulf, in lat. 29° 0′ N., long. 50° 52′ E.; pop. 15,000. It is a mean and dirty town, built on the northern extremity of a sandy peninsula. The anchorage consists of an outer and inner road; the former is not very safe, but the latter, distant about 2½ miles from the town, in 4½ fathoms mud, is free from danger. Bushire is frequented by ships from all parts of India; and her merchants supply the greater part of Persia with Indian and European commodities. From Bombay, Bengal, Muscat, and other places, are imported cotton, woollen, and silk goods, shawls, hardware, watches, and jewellery, indigo, steel, lead, iron, red lead, zinc, tin, bamboos, cardamoms, cloves, cinnamon, china ware, cassia buds, coffee, camphor, ginger, musk, nutmegs, pepper, sugar, sugar-candy, turmeric, and tobacco. The principal returns are bullion and silk, besides which there are exported drugs of various kinds, sheep's and goat's wool, Cashmere shawls, carpets, rose water, ottar of roses, Shiraz wine, &c.

MEASURES, WEIGHTS, MONEY, REVENUE, &c.

The Measures and Weights vary not only in different places, but also according to the purposes for which they are employed. The common cubit or guz = 25 Imp. inches; the royal guz = 37½ Imp. inches; the Tabriz archin = 44 Imp. inches. The league or parasang = $\frac{1}{20}$th of a degree of the equator, or 3½ Imp. miles nearly; but distances are commonly measured by the augage or fursock, the space walked over by a horse in an hour, estimated by travellers at 4½ Imp. miles; great distances are reckoned by the day's journey of a caravan, about 30 miles.

The artaba corn measure, of 25 capichas, 50 chenicas, or 200 sextarios, = 2 Winchester, or 1·939 Imp. bushel nearly.

The principal commercial weight is the batman, of which there are innumerable varieties: the batman of Tabriz of 6 rattels, 300 derhams, or 600 miscals = 6·34 lbs. avoird.; 2 batmans of Tabriz = 1 batman of Shiraz. Gold and silver are weighed by the derham = 150 troy grains nearly; but the miscal or ½ derham of Bushire is only 71½ troy grains, or about 3 dwts. The abas, pearl weight, = 2¼ troy grains.

Money.—The common integer of account is the toman, an imaginary money, divided into 8 reals, 10 sahib-karauns, 20 panabats, 50 abassis, 100 mamoodis, 200 shahies, or 10,000 altens: in some places accounts are kept in piastres of 4 shahies or 40 paras. 50 piastres = 1 toman of account = 10s. sterling. The *purse* is 50 tomans, about £25.

The coins are too variable to admit of being reduced to any certain or uniform standards; the principal are,—in gold, the mahomet-shahie, worth about 10s. 6d., and the bijaclie, 9s.; in silver, the sahib-karaun, and the panabat; gold tomans and silver rupees of different values also circulate near the seacoast. A variety of foreign coins are, besides, in circulation, chiefly ducats, Spanish and German dollars, and Russian rubles, or manêts; the latter current only in the districts bordering on Turkey and Russia. Large payments are generally made by weight.

The Public Revenue is estimated by Mr Fraser at £1,500,000, derived from regular and irregular taxes, annual presents, fines, confiscations, and rent of crown lands and buildings.

A Treaty of Commerce with Britain was concluded October 28, 1841.

Art. 1. "The merchants of the two mighty states" are reciprocally allowed to buy and sell in any part; and on the goods which they import, customs duties shall be levied once for all on entering, and on exports at the time of going out; the amount of each being that levied on merchandise of the most favoured European nations.

Art. 2. Britain, besides the East India Co.'s resident at Bushire, is allowed to have consuls only at Teheran and Tabriz. Persia is to have consuls at Bombay and London.

PERSIAN, a plain silken fabric, exceedingly flimsy in texture.

PERSONAL PROTECTION, in the Bankrupt Law of Scotland, is a judicial act, having the effect of shielding a debtor from arrest for civil debt. It is a prerogative of the Court of Session, and was formerly an act of judicial discretion. Although now granted as a matter of routine, in virtue of statutory regulations, it is still in the power of the court to withhold it on cause shown. By the Sequestration Act (2 & 3 Vict. c. 41), the Lord Ordinary, who awards sequestration, grants a warrant of protection, to endure till the meeting for electing the trustee (§ 13). At that meeting, or the meeting after the bankrupt's examination, or at any special meeting for the purpose, a majority in number and value of the creditors present may resolve to authorize the trustee to apply for a renewal of the protection (§ 58). [SEQUESTRATION.] By the Cessio Bonorum Act (6 & 7 Wm. IV. c. 56, § 15), the Court of Session and the Sheriff are respectively empowered, in cases before them, on proof of the statutory notices to the creditors, to grant warrant to liberate the debtor if he is in prison, and if he is at large to grant him personal protection, on his lodging with the clerk of court "a bond, with a sufficient cautioner, binding themselves that he shall attend all diets of court whenever required, under such penalty as may be reasonable, and which, if forfeited, shall be divided among the creditors." [CESSIO BONORUM.]

PERU extends 1680 miles along the W. coast of S. America, from lat. 21° 28′ S. to lat. 3° 30′ N. Boundaries, N. Ecuador; E. Brazil and Bolivia; S. Bolivia; W. Pacific Ocean. Area, 485,000 sq. miles. Population, 1,800,000, of which 240,820 are Spanish Creoles, the rest Mestizoes and Indians. Capital, Lima; pop. 70,000. Government, republican; the legislative body consists of a senate and house of representatives; the executive is vested in a president, assisted by a ministry and a council of state.

Peru is naturally divided into three regions, which differ greatly in climate and productions. 1. The "Valles," or coast region, covering 92,600 sq. miles, the greater part sandy or stony wastes, but having the valleys with which it is furrowed rich and well cultivated. The climate is dry, moderately warm, and very healthy; and the European cerealia, maize, rice, and the sugar-cane, are cultivated; also the fruits of S. Europe, including the vine, from the produce of which both wine and brandy are manufactured. Nitrate of soda abounds in the southern districts, and salt is procured on the shore.

2. The "Montana," or region of the Andes, extends about 205,000 sq. miles; its eastern half is covered with forests, but the western mountains are nearly bare. Several of the valleys, particularly that of the Rio Jauja, are fertile and moderately well cultivated. The cerealia and fruits of Europe are grown in the higher districts, and tropical products, including coca, in the valleys; while in the eastern forests, cinchona bark, copaiba, copal, and other drugs are procured. On the pastures of the table lands, many cattle, horses, and mules are reared; also llamas, used as beasts of burden on the high ridges. This region abounds in minerals, particularly silver, the mines of which, at Pasco and Gualgayoc, are the richest in S. America. [BULLION.] Quicksilver is obtained at Huancavelica, and gold occurs in several streams; iron, lead, copper, and brimstone are also found.

3. The "Eastern Plains," extending 187,000 sq. miles, consist of forests alternating in some places with savannas; the whole uncultivated; though, as far as known, this is the most fertile region of Peru. In the forests the Indians procure vanilla, sarsaparilla, copaiba, copal, caoutchouc, and other gums and resins, which are sent to the Brazilian settlements on the Amazon.

Manufactures can scarcely be said to exist; and inland trade is impeded by the mountainous nature of the country, and the want of carriage roads, a defect not supplied by navigable rivers. But the maritime commerce is considerable, embracing, besides that proper to the country, the greater part of that of Bolivia, of which Arica and the other southern ports of Peru are the natural outlets. An active intercourse is maintained with the adjoining maritime states, to which sugar, wine, brandy, salt, and other commodities are sent; but the most important is that with Europe and the United States, to which Peruvian and Bolivian produce were exported in 1838 to the amount (exclusive of $259,823 of Colombian and Central American produce), of $8,061,593, or £1,612,318. Of this, $6,542,062, or £1,308,412, consisted of bullion; whereof, $1,718,206 were shipped from Bolivia, and $4,823,856 from Peru: the remainder was made up of 31,008 quintals wool, in value £93,485; 30,412 quintals cotton, £72,043; 129,610 quintals nitrate of soda, shipped wholly from Iquique, £51,844; besides 5479 quintals bark; 2742 dozen chinchilla skins; 12,073 quintals copper ore, or burillas; 8155 hides; 14,900 quintals sugar; and 6256 quintals tin. The exports also embraced cinchona, sarsaparilla, and other drugs. About two-thirds of the bullion, and the great bulk of the other articles, were sent to Britain; the remainder mostly to the United States and France.

The imports consist chiefly of British manufactures, mostly cottons, but embracing likewise considerable quantities of woollens, linens, silks, and hardware; the whole (as valued in Britain), amounting, 1838, 1839, and 1840, respectively, to £412,195, £635,058, and £799,991; which was exclusive of quicksilver and other foreign goods reshipped from Britain. A variety of manufactured articles are likewise brought from the United States and France.

PORTS.—*Callao*, distant 6 miles from Lima, of which it is the port, lies on the N. side of a tongue of land, in lat. 12° 4′ S., long. 77° 14′ W. It is well fortified; but the houses are mean-looking. The roadstead is the best on the Peruvian coast; and there is a rude pier accessible to large vessels. In 1839, 60,749 tons of shipping entered, including 11,364 tons British.

Arica, farther S., in lat. 18° 28′ S., long. 70° 24′ W., is, owing to a heavy surf, of difficult and sometimes impracticable access, except on the inflated seal-skin floats or *balsas* of the natives. It is, notwithstanding, a rising port, being the outlet of a rich mineral district, as well as the place whence the Bolivians receive European manufactures. About 25,000 tons of shipping enter annually, nearly one-half British.

Payta, Lambayeque, Pisco, Yslay, and Iquique, are the chief other ports.

MEASURES, WEIGHTS, MONEY, FINANCES, &c.

Measures and Weights, same as Spain.

Money.—The integer of account is the dollar of 8 reals, usually estimated in Peru, in conversions into sterling, at 4s. The Peruvian dollar is coined at the rate of 8½ to the marc of silver, of the standard of 10 dwts. 20 grains.

Finances.—The revenue is commonly stated at $5,000,000, or £1,000,000, but we have no recent account of it, or of the domestic debt. The foreign debt consists of three British loans,—£450,000 contracted in 1822, at 88 per cent.; £750,000 in 1824, at 82 per cent.; and £616,000 in 1825, at 78 per cent. The interest, 6 per cent. per annum, rests unpaid from October 1, 1825.

A Treaty with Britain, June 5, 1837, provides for reciprocal protection to trade; places the two states mutually on the footing of the most favoured nations; exempts the subjects of the one country residing in the other from all compulsory military service, and in the event of war, is to allow them 6 months to wind up accounts; and contains a great variety of other regulations, for which see *Hertslet's Treaties*, vol. v. p. 383.

PERUVIAN OR CINCHONA BARK, a celebrated medicine obtained from a genus of trees (*Cinchona*) confined to the lofty Cordilleras of the Andes in S. America, between La Paz, in about 22° S. lat. and Santa Martha, near 10° N. lat. Its febrifuge powers are said to have been made known in Europe in 1640, by a Countess Cinchona, wife of the viceroy in Lima, who had been cured by it. The bark is collected in the forests in the dry season, between September and November, and sent in bundles in the green state to the nearest inhabited place, where it is dried in the sun, the utmost care being requisite to protect it from wet, as even a few hours' dew falling on the half-dried bark will give to the interior a blackish appearance, and greatly lessen its value. The finest is said to come from single trees growing in the coldest and most elevated spots, but there are many varieties; and as mixtures and adulterations are also common, great experience is necessary to select the finer kinds. Of these, the four following are distinguished by British druggists.

1. CROWN BARK (Sp. *Cascarilla fina de Uritusinga*), the produce of the *C. Condaminea* of Humboldt, found near Loxa, is quilled, straight, 6 to 15 inches long, from the size of a crow-quill to that of the thumb in diameter, and in thickness from 1-30th to 1-6th of an inch. Epidermis entire, with external surface longitudinally furrowed, and crossed with fissures; it presents various tints of gray, irregularly covered with minute white lichens. Inner surface and powder of a cinnamon brown colour. Taste, bitter, somewhat acid, aromatic, and astringent; odour, faint, peculiar, and aromatic. The quills of middle size are preferred.

2. GRAY BARK (Sp. *Cascarilla provinziana*), also called silver bark, and Huanaco bark, procured from the *C. Scrobiculata* of Humboldt, is exported from Lima. It occurs in quills larger than the preceding, less furrowed, more uniformly grayish-white, inside redder, fracture closer and more resinous; epidermis entire. Taste and odour nearly identical with crown bark. It is a superior kind, but it comes mixed with ash-bark and rusty bark.

3. YELLOW BARK (Sp. *Cascarilla Calisaya*), the source of QUININE, is shipped at Arica, but its origin is doubtful. It occurs partly quilled and partly flat. The quills, larger than the crown and gray, are 9 to 15 inches long, 1 to 2 inches in diameter, and 1-8th to 1-3d inch thick; generally single, with the epidermis wrinkled longitudinally, and with transverse fissures; rough; grayish-brown, mottled with lichens. Inner surface smooth, and yellower than the preceding kinds. Transverse fracture close but splintery. Taste and odour stronger than crown. The flat pieces, often stripped of their epidermis, are 8 to 18 inches long, and 1 to 4 inches broad. Good flat bark is preferred to the quilled; and the finest are the middle-sized pieces, dense and close in texture. Cuzco bark and Orange bark are sometimes substituted for this kind.

4. RED BARK (Sp. *Cascarilla colorada*), also of unknown origin, consists sometimes of quilled, but more commonly of flattish pieces, from 2 inches to 2 feet long, 1 to 5 inches broad, and ¼ to ¾

inch thick; generally covered with the epidermis, which is rough, wrinkled, little fissured, reddish-brown, with grayish efflorescence in the hollows, from lichens. Taste very bitter and astringent. The quills, similar in size to those of yellow bark, are paler than the flat pieces. Red bark is scarce, dear, and rarely seen genuine.

The inferior, yet still genuine kinds, are chiefly,—Ash-bark, of unknown origin, mostly used for adulterating crown: Rusty bark, imported from Lima, little esteemed, and in Britain purchased only for the German market: White Loxa bark differs little from Rusty: Hard Carthagena bark, and Woody Carthagena bark, both quilled and flat, are little valued: Cuzco bark, a good species, very bitter, is rare in the English trade: and Orange bark of Bogota, which resembles yellow bark, but is spongy, and feebly bitter; it is rare in Europe. Pale bark is an old vague commercial term applied to inferior barks. The spurious barks used in adulterations are chiefly species of Exostemma, Buena, and Strychnos. For farther details, we refer to Dr Christison's Dispensatory, the work chiefly used in compiling this article.

Cinchona bark is brought to the United Kingdom in chests or serons, from Chili and Peru. The quantity imported varies greatly from one year to another; but on an average of the five years to 1840, it amounted to nearly 280,000 lbs., of which about 90,000 lbs. were entered for home consumption, and the rest re-exported to the Continent.

PETROLEUM, a bituminous kind of mineral oil: at the usual temperature it is rather thicker than common tar, and has a strong disagreeable odour. When exposed to the air it thickens, and passes into a species of bitumen. An oil similar to naphtha is obtained from it by distillation. It is principally found in coal districts. Its chief localities in this country are, Ormskirk in Lancashire, Coal Port near Colebrookdale, and Pomona, one of the Orkney Isles. In Asia it is found plentifully, and its uses to the inhabitants are important: from Mosul to Bagdad it is used instead of oil for lamps; when mixed with earth or ashes it serves for fuel.

PEWTER is commonly made of 4 parts of tin and 1 of lead; but a fine kind is said to consist of tin mixed only with a little antimony and copper. It is used in the manufacture of drinking-vessels; formerly plates and dishes were also made of this alloy.

PHILIPPINE ISLANDS, an extensive group in the N. E. extremity of the Indian Archipelago, betwixt lat. 5° and 20° N., and long. 120° and 126° E. The chief islands are Luzon or Luçonia, Mindoro, Panay, Negros, Masbate, Zebu, Bohol, Leyte, Samar, and Mindanao. The whole are claimed by Spain; but several of them are independent.. Population subject to that kingdom, in 1837, 3,202,760, of which 2,264,807 were in Luzon; chiefly Papua negroes, Malays, and other Eastern tribes, with about 3000 Europeans. The government is vested in a captain-general, who has extensive powers. These islands have been possessed by Spain since 1564. They were taken by the British in 1762, but restored in 1764.

Few countries are more favoured as to soil and climate than the Philippines. The only disadvantages under which they labour are a very frequent exposure to tornadoes and typhoons, and a somewhat excessive moisture. The rainy and windy season generally lasts from May until September, sometimes so late as the beginning of December: in June and July, the winds sometimes blow with incredible fury in the N. part of Luzon. Notwithstanding their tropical latitude, the height of their mountains and sea-breezes prevent the heat from being oppressively severe; and as a general spring continues a large proportion of the year, if the atmosphere were less moist, the climate would be unobjectionable. To this redundant moisture, however, must be attributed the great luxuriance of the country,—the trees being always covered with leaves and the soil with vegetation. The islands are capable of producing all colonial commodities. In several places there are mines of gold and iron, but they are not worked. The chief object of cultivation is rice, which, with fish, forms the ordinary food of the natives. The other products resemble those of tropical countries in general,—including sugar, chiefly cultivated in the plain of Pampanga in Luzon, coffee, and tobacco of superior quality, indigo, and a variety of commodities peculiar to the Eastern Islands; timber, well adapted for shipbuilding, is found in Luzon, also damar and a species of native hemp. Of late years the demand for opium in China has led to the introduction and cultivation of the poppy, for which the soil is well adapted. The cattle and horses introduced by the Spaniards have multiplied so much that they run wild among the mountains, and are destroyed in large numbers for the hides. Fish abound in the bays and creeks.

The geographical position of the Philippines is most favourable for commercial intercourse with India, America, Australia, and China. Their vicinity to China is indeed their most distinctive peculiarity, the E. end of Luzon being little more than 400 miles distant from the provinces of Fokien and Canton. This proximity has at different times excited the jealousy of the Chinese, and would alarm them still more if the Spaniards displayed energy and activity.

Manilla, the capital, and commercial emporium of the Philippines, lies in lat. 14° 35′ N., long. 121° 2′ E., in the E. corner of an extensive bay, on the S. W. coast of Luzon. It stands on the banks of the river Pasig, which is here about as broad as the Thames at Vauxhall. There is a bar at the entrance, over which there are only 12 feet of water at spring-tides, and ships anchor in roads about 1½ mile from the shore, except during the S. W. monsoon, from April to November, when they take shelter in Carite, a small port 3 leagues S. of Manilla. Population, including the native suburbs, 120,000. The foreign trade, before the revolution in Spanish America, was restricted to one galleon annually to Acapulco, but since that event it has been thrown open to other nations, and materially increased by intercourse with the British and Americans. The staple exports to the European market are sugar, indigo, rum, cigars, hemp, hides, cotton-wool, and cassia; and to China, rice, sapan-wood, edible birds' nests, and tripang. Small parcels of coffee, ebony, sulphur, pearls, mother-of-pearl, tortoise-shell, and cordage are also exported. European manufactures, including considerable quantities of British cottons and woollens, are imported through various channels.

Accounts are kept in dollars; and the measures and weights are partly Spanish and partly Chinese.

PHOSPHORUS is usually obtained by acting upon powdered *bone-earth* with sulphuric acid. When pure, it is tasteless, colourless, or of a pale buff hue, semi-transparent, and flexible. Sp. gr. 1·770. When exposed to the air it undergoes a slow combustion, exhaling luminous fumes of a peculiar odour, and hence the necessity of preserving it in water. Phosphorus and some of its combinations are used in medicine, and for certain purposes in the arts.

PIANO FORTE. [MUSICAL INSTRUMENTS.]

PIASTRE, the dollar of exchange in Spain, where it is also called the Peso de Plata, is an imaginary money estimated at 8 reals old plate, or 15 reals 2 maravedis vellon; and as the hard dollar [DOLLAR] is worth 20 reals vellon, the piastre is equivalent at par to 3s. 1¾d. sterling. The piastre or piece of eight was formerly a silver coin worth about 4s. 6d., being in fact the old dollar. The piastre is also a coin and money of account in Turkey, where, however, it is now so much depreciated as to be worth only from 2d. to 2½d. sterling.

PIC, OR PIKE, a Turkish cloth measure, equal ¾ Imp. yard.

PILCHARD (Fr. *Sardine*, *Pélamide*. Ger. *Sardelle*. It. *Sardine*. Sp. *Sardina arenque*), a species of herring (*Clupea pilchardus*), about the same length as that fish, but having its body thicker and rounder, and its scales larger. It frequents the British seas, but is only found in great numbers on the shores of Devon and Cornwall, chiefly from Dartmouth to Padstow, round the Land's End; the principal fishing stations are, St Ives, Mountsbay, St Mawes, and Mevagissey, where they arrive in shoals in August and September, and again in November or December; and are caught both by seans and by drift-nets. They are sold on the beach at about 1s. per 100. Those intended for curing are first salted in heaps, and then packed into hogsheads, each containing about 2500 fish. The oil with which the fish abounds is afterwards extracted by pressure, 48 hhds. yielding about 1 tun of oil. The pilchard fishery is perhaps of less comparative importance at present than it was 70 years ago. An opinion prevails that it has been injured by the withdrawal, in 1827, of the bounty of 8s. 6d. upon each hhd. exported; but though the temporary effect may have been severe, the permanent interests of the fishery will no doubt be benefited by the return to a more healthy system. At present about 3500 men are employed at sea, and 5000 men and women on shore. The capital directly invested in the fishery, in 1827, was stated by Mr Couch to Mr Yarrel to be £441,215: it is now probably much less. The home market is almost entirely confined to Devon and Cornwall; scarcely any reach London; and it is stated as a reason for this, that they are not agreeable to the public taste. About 30,000 hhds. are annually exported, chiefly to Naples, Venice, Leghorn, Ancona, Genoa, and Trieste. The consumption at most of these places might, however, be greatly increased by a reduction of the present heavy duties.

PILOT, a person taken on board a ship at a particular place, for the purpose of steering it through a river, road, or channel, or from or into a port. Pilotage up and down the rivers Thames and Medway, and along the whole of the coast from Orfordness to the Isle of Wight, is regulated by the statute 6 Geo. IV. c. 125, which gives the appointment and general superintendence of pilots to the corporation of the Trinity House of Deptford Strond, excepting those under the Lord Warden of the CINQUE PORTS, who, however, act under similar regulations. The statute directs that no person shall, under the risk of incurring severe penalties, take charge of a vessel as pilot without a license from the Trinity House or Lord Warden; and such license, which is only to be granted after an examination of the qualifications of the person seeking to obtain it, may be suspended in cases of negligence or misconduct. In other parts of the United Kingdom, pilots are appointed and regulated, either by local acts of Parliament, or by ancient charters of incorporation; but several provisions in 6 Geo. IV. c. 125, are applicable to all parts of England.

In all those parts of a voyage where a pilot is employed by regulation or usage, termed "a pilot's fairway," one must be obtained (Vide *Abbot on Shipping*). The owner or master of a vessel having a pilot on board, licensed by the ordinary custom of the place, is not responsible for any damage which arises from neglect or want of skill on the part of the individual appointed. But his proceedings must not be controlled by the master. On the other hand, the presence of a pilot does not absolve the master from the consequences of injury caused by his own carelessness or want of skill.

In some foreign countries the term pilot is further applied to an officer whose special duty it is to steer the vessel during the general course of the voyage. No such officer, however, is known either in the British merchant-service or ships of war. In the latter, the charge of the helm is one of the many duties of the master and his mates.

PIMENTO (Fr. & Ger. *Piment*. It. *Pepe garofanato*), a small, dry, reddish-brown berry, the fruit of a tree (*Myrtus Pimenta*) common on the N. side of Jamaica, whence it is called Jamaica pepper. It is also named Allspice, from its taste and flavour (qualities which reside chiefly in the cortical part of the berry) being supposed to resemble that of a mixture of cloves, cinnamon, and nutmegs. The berries are gathered before they are ripe, and dried in the sun; the smallest and most fragrant being preferred. The produce of the pimento crop, though sometimes very abundant, is variable; and there is seldom a plenteous harvest above once in five years. A corresponding fluctuation occurs in the annual importations into Britain, which vary from about 1,000,000 lbs. to upwards of 3,000,000 lbs. With the exception of a small quantity from the United States and other places, pimento is imported wholly from Jamaica, the produce of which has declined considerably of late years. It is packed either in bags or hogsheads. On an average of the five years to January 1842, the quantity imported was 1,181,435 lbs.; entered for home consumption, 304,164 lbs. The excess of the former above the latter was re-exported to the Continent, and to British America and Australia.

PINCHBECK, a factitious metal resembling brass, but containing more copper.

PINE, a family of trees (*Pinus*) mostly inhabiting the northern parts of Europe and America. They almost all affect siliceous sandy soils, but many will flourish in rocky and comparatively barren lands. The trees are various in size. Their chief use is in domestic architecture; whence the pine has been called "the builder's tree." Having usually, however, a long, straight, conical, undivided trunk, several kinds are prized for ship-masts. They all yield resinous matter. The chief species are the following:—

The Common Pine or Scotch Fir (*P. Sylvestris*).—This species, of which there are many varieties, stands in the first rank of forest trees, whether as regards its hardy habits, its rapid growth, or its value in the production of useful timber, the "red deal" of the carpenter. The best is that nearest the root. In Scotland, the fir often acquires a great size, the climate being well suited to it. In England, it is chiefly valued as a screen or nurse to other trees. Dense forests of it cover the mountainous tracts of Northern Europe, the timber of which, with its resinous products, TAR, PITCH, and TURPENTINE, forms the great staple of many of the Baltic states. The finest is the Norwegian: that shipped from Memel, Riga, and Dantzic is inferior to it, though still good.

The Common or White Larch (*P. Larix*), a native of Switzerland, Russia, and Siberia, grows very erect, with drooping branches, gradually diminishing from the base, and giving it a pyramidal form. No tree has received greater attention in modern times from the British planter. It was introduced into Scotland by Lord Kames in 1734; many millions were afterwards planted on the Atholl estates; and it is now extensively cultivated upon barren exposed land throughout Britain. It grows rapidly, and produces timber of great excellence, both for domestic purposes and shipbuilding: it is equally good throughout its thickness, possessing no sap-wood. The larch also yields "Venice turpentine," and its bark is nearly as valuable as that of the oak.

The Norway Spruce Fir (*P. Abies*), which attains a height of 150 feet, constitutes, with larch, the greatest proportion of the vast woods of Norway and Sweden. It is inferior to larch, though durable and of a fine even grain. In the market it is called white or Christiania deal. The tree attains a large size on cold damp clays, situated on declivities.

The Black or Red Spruce Fir (*P. Nigra* or *Rubra*) grows in the most inclement regions of N. America, especially in swampy valleys having a deep black soil. Its timber—strong, light, and elastic—is of great value. It is employed for the yards of ships, and, in districts where oak is scarce, also for their knees; though apt to split, floors are also occasionally laid with it. The White Spruce (*P. Alba*), often found along with it in America, is smaller, and yields inferior timber.

The Weymouth or American White Pine (*P. Strobus*), with an erect and lofty trunk, is a native of Canada and of the more northern districts of America. It grows very fast in sheltered situations and moderately moist sandy soils; and produces the clean, white, soft, but perishable timber, called in America "Pine," largely exported in the form of deals both to Europe and the West Indies. It is also much used in shipbuilding.

The Yellow Pine (*P. Mitis*) is a fine tree, inhabiting the pine forests of North America, yielding timber of great value both for domestic and naval architecture, provided the sap-wood is removed. In Britain it is regarded as very durable, and in America it ranks next to

The Southern Pine (*P. Australis* or *palustris*), the best species in the New World. This tree is a native of Virginia and Carolina, where it grows from 60 to 70 feet in height, with a trunk from 15 to 18 inches in diameter for 2-3ds of its length. It produces light, clear, and durable timber, which is extensively used in shipbuilding, especially for masts; also abundance of tar.

The chief other species are the Cedar [CEDAR]: the Red Pine (*P. Resinosa*) of Canada, yielding a fine-grained strong durable wood of a close texture: the Corsican Pine (*P. Laricio*), a noble tree of S. Europe, extensively used by the French in shipbuilding: and the Silver Fir (*P. Picea*), largely grown in the kingdom of Naples. The Hemlock Spruce Fir of N. America yields wood of little value; but a great deal of the essence of spruce is obtained from its shoots, and its bark is exceedingly valuable. [TIMBER.]

PINE-APPLE, the well-known succulent fruit of a tropical plant (*Ananassa sativa*), indigenous to America and the W. Indies, but commonly reared in hot-houses and pots in Britain. It is the most luscious fruit produced in this kingdom, where its noble appearance has always rendered it a special object of horticultural enterprise. In England it has been obtained of a size weighing 14 lbs. In its aboriginal state it is inferior; and except perhaps the Burmese pines, the most delicious specimens are the produce of this country.

PINK ROOT. [SPIGELIA].

PINS (Fr. *Epingles*. Ger. *Stecknadeln*) are made on a great scale at Birmingham, where some manufacturers employ several hundred persons in the fabrication of these little instruments; they are also largely produced at Warrington, Sheffield, Gloucester, and London. Of late several beautiful inventions have been successfully employed to make pins almost entirely by machinery. The number daily made in this country for home use and exportation is estimated by Dr Ure at fifteen millions.

PINT, a British measure equal ⅛th part of a gallon. [MEASURES.]

PIPE, a wine measure varying in different places. [MEASURES. WINE.]

PIPE-CLAY, a very plastic and tenacious kind of clay, of a grayish or yellowish-white colour, found near Poole in Dorsetshire, in the Isle of Purbeck, and other places. It is manufactured into tobacco-pipes; and is besides used as the basis of the queensware pottery, as well as a detergent by scourers of cloth.

PISTACHIO NUTS (Fr. *Pistaches*. Ger. *Pistachen*. It. *Pistacchi*, *Fastucchi*), used at the dessert and for confections, are the fruit of a small tree (*Pistacia vera*) indigenous to Syria and Persia, but now naturalized in the S. of Europe. They are moderately large, of a red or pink colour, and contain a greenish kernel, having a pleasant, sweet, unctuous taste, resembling that of almonds. They are imported into Britain from Turkey, France, Sicily, and other places.

PISTOLE, a Spanish gold coin, equal ¼th of the DOUBLOON.

PITCH, a substance made by melting coarse hard resin with a portion of tar, generally one-half; but the quantity is increased or lessened according to the consistency of the latter.

PITCH BLENDE, a ponderous metalliferous ore, of a blackish colour, much valued by porcelain painters. Localities—Saxony, Bohemia, Hungary, and Cornwall.

PIX, the name given to a box kept at the British mint, in which a small sample of the coins struck are deposited, in order to be assayed and compared with a standard preserved in the Exchequer. This operation, called the "Trial of the Pix," is performed in presence of certain members of the Privy Council, the officers of the mint, and a jury of the Goldsmiths' Company. An account of this ancient ceremony will be found in Ruding's "Annals of the Coinage." It now usually takes place on the appointment of a new master of the mint before his predecessor receives a discharge.

PLAICE, a species of flounder (*Platessa vulgaris*) taken in abundance on the coasts of Britain and Ireland. It spawns in February or March; and is in the best condition for the table at the end of May.

PLANE, a British forest tree (*Platinus*), admired for its beauty; but of little value except for fuel.

PLANTAIN, a delicious fruit, yielded by the *Musa sapientum*, a plant about 15 or 20 feet in height, found in most tropical countries. It closely resembles the banana; is at first green, but when ripe of a pale yellow colour, about a foot long, and nearly two inches in diameter. In favourable situations, however, it is to be found of nearly a foot in circumference, with a length of seven or eight; and a bunch sometimes contains from 160 to 180, and weighs from 66 to 88 lbs. It is generally cut when unripe; and after being skinned is roasted and served up as bread. It is also used for fattening domestic animals. [BANANA].

PLASMA, a green, semi-transparent calcedony, having a dark tint, which is said to be coloured by chlorite. It is found chiefly in India, and is brought to this country in the shape of beads and other ornaments; occasionally specimens are found among the ruins of Rome.

PLATA, LA, REPUBLIC. [BUENOS AYRES.]

PLATE AND PLATED WARES. Plate is a term applied to gold and silver wrought into furniture or ornaments. Plated wares are articles made, in imitation of the preceding, of base metal, coated over with gold or silver. The gold-beaters' trade is carried on in London, and, though to an inferior extent, in Birmingham, Dublin, Edinburgh, Glasgow, and Liverpool. Silver and silver-plated goods are made chiefly in London, Birmingham, and Sheffield. The quantity of gold and silver articles manufactured in the United Kingdom is considerable; but beyond the produce of the duties, mentioned below, we possess no data for computing its amount. The value of plated wares annually consumed has been estimated so high as £1,200,000,—this department having derived great advantage from the perfection of the machinery now used in this country for rolling metals; while it has no doubt likewise received encouragement from the heavy duties imposed on gold and silver articles. The declared value of the plate, plated ware, jewellery, and watches, exported from the United Kingdom, in the years 1838, 1839, and 1840, amounted respectively to £240,584, £274,305, and £204,427; sent chiefly to India, the colonies, and the United States.

ASSAY REGULATIONS, LICENSES, DUTIES, AND DRAWBACKS.

Assay Regulations and Marks.—Articles of gold must be of the fineness of 22 carats, or $\frac{11}{12}$ths, the money standard, or of 18 carats: the latter is employed chiefly for watches and rings. Silver must be of the fineness of 11 oz. 2 dwts., or $\frac{37}{40}$ths, the money standard, or of 11 oz. 10 dwts.; but the latter, called "new sterling," is seldom used. [CARAT. COIN.]

All gold and silver articles of the money standard are marked with the following devices: in England a lion, in Scotland a thistle, and in Ireland a figure of Hibernia. The gold standard of 18 carats is in addition marked with the number 18, and the new sterling with the figure of Britannia.

Articles of all standards capable of bearing a stamp are also marked with the maker's initials, the arms or device of the assay office, and a letter indicating the year. The device of the Goldsmiths' Office, London, is a leopard's head; of the Assay Office, Birmingham, an anchor; of Sheffield, a crown; of Newcastle, three castles; of Dublin, a harp and crown; of Edinburgh, a castle; and of Glasgow, a tree with a bell and fish. The letter used by the Goldsmiths' Company indicates the year by beginning the alphabet in May 1796, and reckoning on to 20 letters progressively, omitting J and ending with U. The first 20 years is represented by a Roman capital; the second, commencing May 1816, by small Roman characters; the third, commencing May 1836, by old English capitals.

On articles for which a duty is paid, an impression of the queen's head is likewise stamped.

The cuttings of the articles assayed are kept in each office in the Pix [PIX] or "Diet Box," in order to be proved before the proper officers.

Annual Licenses, payable in Britain by dealers in gold and silver plate, in which gold exceeding 2 dwts. and under 2 oz., or of silver exceeding 5 dwts. and under 30 oz., is contained in one piece, £2, 6s.

When of greater weight, the cost of the license is £5, 15s.; and every pawnbroker and refiner of gold or silver plate must take out this license.

Gold or silver lace is not deemed plate.

Stamp Duties in Britain on plate made since August 31, 1815; namely, gold, 17s. per oz.; and silver, 1s. 6d. per oz. *Exemptions*, gold watch-cases, rings, and any articles of gold not exceeding 2 oz. in weight; silver watch-cases, chains, necklaces, beads, lockets, filigree work, shirt buckles or brooches, stamped medals, and spouts to china, stone, or earthenware teapots, of any weight whatever; tippings, swages, or mounts, not weighing 10 dwts. of silver each, and not being necks or collars for castors, cruets, or glasses appertaining to any sort of stands or frames; wares of silver, not weighing 5 dwts. each: this exemption is not to include necks, collars, and tops of castors, cruets, or glasses appertaining to any sort of stands or frames, buttons to be affixed to or set on any wearing apparel, solid silver buttons and solid studs, not having a bizelled edge soldered on, wrought seals, blank seals, and bottle tickets, shoe clasps, patch boxes, salt spoons, salt ladles, tea spoons, tea strainers, caddy ladles, buckles, and pieces of garnish, cabinets, knife cases, tea chests, bridle stands or frames. (52 Geo. III. c. 59; 55 Geo. III. c. 185; 1 Geo. IV. c. 14; 6 & 7 Wm. IV. c. 69.)

In Ireland the duty, formerly 1s. per oz. on both gold and silver plate, was raised in 1842 (Oct. 10) to the same rates as in Britain.

On the exportation of Irish plate to Britain a countervailing duty of 16s. per oz. was formerly payable on gold, and 6d. per oz. on silver; equivalent drawbacks being allowed on the exportation of British plate to Ireland; but these are now abolished.

The net produce of the stamp-duties on plate was in 1820, £86,750; 1830, £81,646; and in 1840, £82,968; about 1-18th being from gold.

On exportation to other countries the whole duties are drawn back, debentures for which are issued at the custom-house; though, in London, the drawback is payable at Goldsmiths' Hall.

Previous to entry for drawback, bond to be given that the plate shall not be re-landed, and declaration made as to the stamping and time of manufacture; which bond remains in force until the exporter produce to the collector the bills of lading, having at the foot the receipt of the master of the vessel, and on the back that of the consignee; describing the kinds and quantities of plate so shipped, together with the name of the consigner. If the ship be lost, or return not within three years, the bond, on proof thereof made to the collector, shall be cancelled. (25 Geo. III. c. 64.)

PLATINUM, a metal of a colour between steel-gray and silver-white. Sp. gr. 21·5. It is very hard, and possesses great malleability and ductility. It may be beaten into fine leaves, and drawn into wire not exceeding 1-2000ths of an inch in diameter. When about 1-13th of an inch thick it sustains a weight of 270 lbs. This metal is extremely difficult of fusion; but it has the property of being united by *welding* either one piece to another, or with iron and steel. This property admits of useful applications in the arts; wires may be joined so as to form rings and chains; and, with a view to economy, platinum may be attached to iron or steel for many scientific purposes. The perfection with which vessels of platinum resist the action of heat and air, of most of the acids, and of sulphur and mercury, renders them peculiarly valuable in many chemical applications; and, notwithstanding the high value of the metal, which is worth between four and five times its weight of silver, it is now much employed for crucibles, retorts for the distillation of sulphuric acid, mirrors for reflecting telescopes, and also by gunsmiths. In Russia it is made into coins.

Platinum was discovered about 1741; but it attracted little notice until the mode of purifying it and rendering it malleable was discovered by Dr Wollaston. It is found in the metallic state in Brazil and Peru; in Antioquia in South America; in Estremadura in Spain; and lately in considerable quantities in the Uralian Mountains. The general appearance of it in the rough state in which it is imported is that of small grains or scales, darker than silver, and extremely heavy.

PLEDGE. [PAWN.]

PLUM, the well-known fruit of a tree (*Prunus domestica*), indigenous to the greater part of the northern hemisphere. Of this fruit no fewer than 274 varieties are enumerated in the Catalogue of the Horticultural Society. Dried plums form an article of commerce under the name of prunes and prunelloes. They are largely imported into this country, especially from France. The timber of the plum-tree is close and strong; and the bark may be used in dyeing yellow.

PLUMBAGO, OR BLACK LEAD, is the well-known opaque blackish-gray glistening substance used in the manufacture of pencils, for which purpose the best is that procured near Borrowdale in Cumberland. [PENCIL MANUFACTURE.] An inferior soft kind is imported from the East Indies. Plumbago is also employed for making crucibles, in compositions for protecting iron from rusting, and for diminishing friction in machinery.

POLACCA, a vessel with three poles or masts, each of one piece, so that the topsails, on being lowered, can slide down without interruption. This form of rig originated in the suddenness and frequency of squalls in the Mediterranean, where alone vessels of this kind are used.

POLICY OF INSURANCE is the written instrument under which the contract of insurance is effected.

IN MARINE INSURANCE, there are two descriptions of policy—open, and valued. In the former, the pecuniary amount of the interest insured is not stated, but remains to be afterwards adjusted. In the latter, a value is set on the interest insured, and being assented to by the underwriter, it is presumed to be the real value, and to be the sum payable in case of loss. A nominal valuation, however, will not be sanctioned as a cover to a wager or a fraudulent transaction; and if the insured be found to have designedly over-valued his interest, he will not recover even for the loss actually sustained. The amount which should be covered by a valued policy, is the real value of the ship, or the prime-cost of the goods, as the case may be, at the time of effecting the policy, together with the amount of the premiums and other expenses of insurance. The provisions of the 19th Geo. II. c. 37, which prohibit wager-policies, are satisfied if there be an interest, however inadequate to the value put upon it; and it appears to be the general principle that, except where there is fraud, such value is the final adjustment between the parties in the case of *total* loss. In the case of *partial* loss, there is no difference between a valued and an open policy. Before a policy is effected, the terms on which the underwriters will subscribe it are, at Lloyd's, generally noted on a "slip," which is signed by their initials. It has been decided that, unless it be stamped, this document cannot be received in evidence to contradict the policy, and it does not appear what stamp would be applicable. (*Park*, 347.) By statute, 11 Geo. I. c. 30, § 44, when an insurance is effected, a policy must be made out within three days, under penalty of £100. The usual form of the policy, as kept up by the old exclusive companies, is antiquated and cumbersome; but, with these disadvantages, it is supposed to have in its favour the conventional meaning which usage and a course of decisions have given to its terms. The following is the form :—

"*In the Name of God.* Amen.

"A B, as well in his own name, as for and in the name and names of all and every other person or persons to whom the same doth, may, or shall appertain, in part or in all, doth make assurance, and cause himself, and them, and every of them, to be insured, lost or not lost, as and from Upon any kind of goods and merchandises, and also upon the body, tackle, apparel, ordnance, munition, artillery, boat, and other furniture of and in the good ship or vessel, called the whereof is master, under God, for this present voyage, E T, or whosoever else shall go for master in the same ship, or by whatsoever other name or names the same ship, or the master thereof, is or shall be named or called; beginning the adventure upon the said goods and merchandises from the loading thereof aboard the said ship, upon the said ship, &c. and so shall continue and endure during her abode there, upon the said ship, &c. And further, until the said ship, with all her ordnance, tackle, apparel, &c., and goods and merchandises whatsoever, shall be arrived at upon the said ship, &c., until she hath moored at anchor twenty-four hours in good safety; and upon the goods and merchandises until the same be there discharged and safely landed. And it shall be lawful for the said ship, &c., in this voyage, to proceed and sail to, and touch and stay at, any ports or places whatsoever, without prejudice to this insurance. The said ship, and goods and merchandises, &c., for so much as concerns the assureds, by agreement between the assureds and assurers in this policy, are and shall be valued at . Touching the adventures and perils which we the assurers are contented to bear, and do take upon us in this voyage: they are of the seas, men of war, fire, enemies, pirates, rovers, thieves, jettisons, letters of mart and counter mart, surprisals, takings at sea, arrests, restraints, and detainments of all kings, princes, and people, of what nation, condition, or quality soever, barratry of the master and mariners, and of all other perils, losses, and misfortunes that have or shall come to the hurt, detriment, or damage, of the said goods and merchandises, and ship, &c., or any part thereof. And in case of any loss or misfortune, it shall be lawful to the assureds, their factors, servants, and assigns, to sue, labour, and travel for, in and about the defence, safeguard, and recovery of the said goods, and merchandises, and ship, &c., or any part thereof, without prejudice to this insurance; to the charges whereof, we the assurers will contribute each one according to the rate and quantity of his sum herein assured. And it is agreed by us the insurers, that this writing or policy of assurance shall be of as much force and effect as the surest writing or policy of assurance heretofore made in *Lombard Street*, or in the *Royal Exchange*, or elsewhere in *London*. And so we the assurers are contented, and do hereby promise and bind ourselves, each one for his own part, our heirs, executors, and goods, to the assureds, their executors, administrators, and assigns, for the true performance of the premises, confessing ourselves paid the consideration due unto us for this assurance by the assured at and after the rate of

"*In Witness* whereof, we the assurers have subscribed our names and sums assured in ."

It is usual to add the following provision as to liability for average losses in the case of certain destructible commodities :—

"N.B.—Corn, fish, salt, fruit, flour, and seed, are warranted free from average, unless general, or the ship be stranded.—Sugar, tobacco, hemp, flax, hides, and skins, are warranted free from average, under £5 *per cent.*—And all other goods, also the ship and freight, are warranted free from average, under £3 *per cent.* unless general, or the ship be stranded."

The requisites of a policy are generally divided into nine, which are,—

1*st*, *The Name of the Insured.*—By 28 Geo. III. c. 56, policies without the name or firm of the parties interested, or of the consigner or consignee, or of the person residing in Great Britain receiving the order for or effecting the policy, or of the person giving directions to effect the same, are null. Where the persons interested were designed "The Trustees of Messrs Keighley, Ferguson, and Co.," the requisites were considered as complied with (1 *Camp.* 538).

2*d*, *The Name of the Ship and of the Master.*—A material misunderstanding in this respect will vitiate the contract; but to meet the effect of a mere mistake, it is usual to say, "or by whatsoever other name or names the same ship or the master thereof is or shall be named or called;" and where there is no mistake as to identity, these expressions will protect the policy. If a merchant cause three several parcels of goods to be insured for three different ships, and find it convenient to load the whole in one, it is held that he can only recover in the event of a loss for the amount nominally insured on board that vessel. It is a long-established practice to insure upon goods "on board any ship or ships," from a particular port; but it is said that this vague definition ought not to be adopted where the ship is known, as it "seems to amount to a representation, that the party effecting the insurance does not know in what ship the goods are to be brought." (*Marshall*, 321, 322.)

3*d*, *The Subject-matter insured.*—It is not necessary minutely to describe the property, farther than to the effect of exactly identifying it, and letting the underwriter know his risk. The usage of trade is consulted as a clue to the import of expressions which may not have a distinct meaning of their own, but will not be allowed to contradict what is clearly expressed. The word "goods" will be held to include an ordinary cargo, stowed away in the proper manner, but not goods lashed on deck (unless they be such as it is proper and usual so to bestow, as vitriol), nor the captain's clothes and the ship's provisions. Where the interest is of the nature of a factor's lien, or of that description, it will be covered by a policy on "goods;" but freight must be specially insured by name. Money, jewels, and bullion may be insured as goods, if they are part of the cargo, and not on the persons of passengers.

4*th*, *The Commencement and Termination of the Voyage, and the consequent Duration of the Risk.*—If a blank be left for the port of departure, or for that of destination, the policy will be void from uncertainty. It is said, however, that an omission as to time, when the risk is measured by the time, will merely have the effect of making it commence with the execution of the policy. The expression "*at* and from the ship's loading port," covers loss sustained before departure, unless there be undue delay; to cover which the expression "*in port*" is considered necessary. Though the commencement and termination of the risk be distinctly expressed, if there is any thing in the terms calculated to deceive the underwriter as to those of the voyage, the insured will not recover; as, where a ship and goods were insured "at and from the coast of *Brazil* to the Cape of Good Hope, beginning the adventure on the goods, from the loading thereof on the coast of Brazil, and upon the ship in the same manner," and the goods were taken on board at the Cape, and carried to the coast of Brazil, where they were not unloaded, the risk was found not to have attached. (Robertson *v.* French, 4 *East.* 130.) The risk was in fact here described as commencing with the voyage, whereas it commenced during the voyage. Insurance from several ports of departure does not cover a voyage from one to another. The insurance on goods is generally limited till the time when they are "discharged and safely landed;" and these operations must be conducted without undue delay. The underwriter is liable if the loss happen after transshipment into shallops, lighters, droghers, or launches, unless they be those of the insured.

5th, The Perils insured against.—These must be distinctly enumerated; and they are described in general expressions, well understood in practice, from their long and unvarying application. It is usual to insert the words, "lost or not lost," by which the insurer takes upon himself the loss which may have already happened,—a term said to be peculiar to English insurances.

6th, The Premium or Consideration.—This is always expressed as received, and so the engagements are entirely on one side, namely, that of the underwriter. In practice, however, the premium is not paid to the underwriter, but stands in account between him and the broker. [BROKER.]

7th, The common Memorandum, as given above, inserted to protect the underwriter from small losses on perishable commodities. In that form, an exception may be observed, of the ship being "stranded." This has been found to be "a condition;" so that if stranding take place, the insured is admitted to prove all his partial loss, whether directly occasioned by the stranding or not. On this being decided, in 1754 (Contillon *v.* London A. C., *Marshall*, 216-225), the London and Royal Exchange Companies left the alternative of "stranded" out of their policies. Where there is no stranding, there is no recovery for the articles enumerated in the memorandum, unless the loss be total; and so it was found where a cargo of fruit, having been captured and recaptured, was brought to the port of destination damaged 80 per cent. by the delay. (*Park*, 185.)

8th, The Date and Subscription.—It is the practice at Lloyd's not to insert the date in the body of the deed, but for each underwriter to attach it to his subscription.

9th, The Stamp.—This is regulated by 55 Geo. III. c. 184, amended by 3 & 4 Wm. IV. c. 23. A policy cannot legally be stamped after it is executed; but, by 9 Geo. IV. c. 49, policies of mutual insurance, by which persons undertake to insure one another, may be fortified with additional stamps, if not underwritten to an amount exceeding that covered by the former ones. By 35 Geo. III. c. 63, § 13, the stamp laws do not extend "to prohibit the making of any alteration which may lawfully be made in the terms and conditions of any policy of insurance duly stamped, after the same shall have been underwritten, or to require any additional stamp-duty by reason of such alteration, so that such alteration be made before notice of the determination of the risk originally insured, and so that the thing insured shall remain the property of the same persons, and so that such alteration shall not prolong the term insured beyond the period allowed by this act, and so that no additional or further sum shall be insured by means of such alteration." This clause is liberally interpreted in the case of correction of mistakes, or improvement of definitions, provided the thing originally intended to be insured be not altered. An extension of the time of sailing, and a waiver of the warranty of sea-worthiness, do not require a new stamp, nor does the alteration of a voyage "from Stockholm to Swinemunde," to one from Stockholm "to Swinemunde, Konigsberg, or Memel;" nor of a risk "at and from Liverpool to Quebec," to one "from Liverpool to St John's, New Brunswick." But the terms of the original policy cannot be so altered by any memorandum as to bring it into a class requiring a higher duty, without affixing the stamp thereby required (*Smith's Mercantile L.*, 302). The regulations for returning spoiled stamps will be found in 54 Geo. III. c. 133.

(*Park on Insurance. Marshall on Insurance. Smith's Mercantile L.*, 268-334.)

For INSURANCE AGAINST FIRE, the policy, after reciting the receipt of the premium, generally bears that the insurers "covenant and agree, from a day named, and unto and inclusive of another day named, and so long as the insured continues to pay the premium, that the funds of the company shall be liable to make good any such loss as may happen by fire (except it be occasioned by any invasion, foreign enemy, civil commotion, or any military or usurped power)," to the property specified. The terms should express a covenant or agreement, such as may found a clear right of action against the parties, or those they represent, for an order or direction to pay merely founds an equitable claim. It is usual to introduce the scale of premiums applicable to the different risks by indorsement on the policy, referring to them so as to make them part of the contract. The policy must accurately describe the premises, and give the name of the insured. There is no such distinction as that of valued and open policies, the loss being in the usual case restricted, but not measured. An Average clause, however, is now not of uncommon occurrence, by which, when the property is of greater value than the amount insured, the insured recovers, in the case of a partial loss, a sum bearing that proportion to the loss, which the sum covered by the insurance bears to the value of the property. Thus, if the property be worth £1000, and the amount insured be £100, if a loss be caused to the extent of the £100, £10 only is recovered. By 9 Geo. IV. c. 13, § 1, where the insurance covers two detached buildings, or goods contained in detached buildings, so separated as to create a plurality of risks, a distinct sum must be insured upon each, with an exception in favour of implements and stock upon one farm. A policy of insurance is assignable at any time before a loss, to any one to whom the interest insured may have passed. The offices generally give notice upon the policy that "it shall be of no force if assigned, unless such assignment be allowed by an entry in the books of the office, or indorsed on the policy;" and "even without this provision, upon the general principles of law, it is very questionable whether the holder could have any legal demand against the insurers without notice to them" (*Ellis*, 70). By 55 Geo. III. c. 184, the stamp-duty is 1s. for each policy, and 3s. a-year for every £100. Public hospitals, and (by 3 & 4 Wm. IV. c. 23, § 5) agricultural produce, farm-stocking, and implements of husbandry, are exempt. (*Ellis on Fire and Life Insurance.*) [Insurance, Fire.]

In Life Insurance, the policy generally bears that a certain sum is payable at a certain time after the death of the person insured, should he die within the year, or within any succeeding year in which he has duly paid the premium; on the precedent condition that he is at the time of the contract of a certain specified age and habit of body, as contained in a separate declaration by the insured. There are generally certain restrictions on the conduct of the insured. A policy of insurance is assignable; but in terms of the act 14 Geo. III. c. 48, prohibiting wager insurances, the assignee must have an interest [but see Insurance on Lives]. A policy by a creditor falls if the debt be in any manner paid. An assignment of a policy by the debtor on his own life is a preferable security. "It may be considered as the law," says Mr Ellis, (p. 144), "that the assignment of a policy of insurance upon a life will not take it out of the *order* and *disposition* of the assignor, within the meaning of the bankrupt laws (and probably also of an insolvent under the insolvent act), unless notice of the assignment be given to the insurers before the bankruptcy, and that the policy, in defect of notice, will vest in the assignees, notwithstanding the assignment." (*Ellis on Fire and Life Insurance. Blayney on Life Assurance.*)

POMEGRANATES (Fr. *Grenades*. It. *Granati*. Por. *Romaas*. Sp. *Granadas*) are the produce of a low tree, the *Punica granatum*, common in the warmer parts of the temperate zone. This fruit when ripe is about the size of an orange, is covered with a hard light brown rind, and contains a reddish, seedy, refreshing pulp. Promegranates are imported into Britain from the W. Indies and S. of Europe.

POOD, a Russian weight equal 16½ kilogrammes, or 36 lbs. avoird. nearly.

POPLAR, a fast-growing tree (*Populus*) common in the northern hemisphere, of which there are about 15 species, all delighting in moist situations. The wood of the forest species, chiefly the common gray, abele or white, black, Lombardy, aspen, and Canadian, are used in the manufacture of domestic utensils; that of the abele, largely cultivated by the Dutch, is also useful for water-works, laths, and packing-cases; but upon the whole the timber is of little value.

PORTS. [United Kingdom of Great Britain and Ireland.]

PORTUGAL lies between lat. 37° and 42° N., and long. 6° and 10° W.; and is bounded N. and E. by Spain, and S. and W. by the Atlantic. Divisions,—Tras-os-Montes, Entre Douro e Minho, Beira, Alentejo, Estremadura, and Algarve. Area, 36,500 sq. miles. Population in 1838, 3,550,000. Government, a hereditary monarchy, with two chambers, both elected by the people.

Portugal is not separated by any natural boundaries from Spain, which in general aspect it resembles: the mountains are chiefly prolongations of the Astorga, Castilian, and Toledo chains, the whole running from N.E. to S.W., but throwing off numerous branches; while again, the principal rivers,—as the Douro and the Tagus, flowing E., and the Guadiana S.,—are merely the terminations of Spanish streams. There are only two extensive plains; one, the plain of Alentejo, S. of the Tagus, the other S. of the Douro; but there are numerous fertile valleys between the mountains. The climate varies much in different places: on the coast it is very warm, especially to the S. of Cape Roca; and some parts of Alentejo are so arid as to be uninhabitable, from the scarcity and badness of the water; yet there are abundance of rich tracts in other districts, to the productions of which considerable variety is given by the difference of elevation and of latitude.

But the long-continued imbecility of the government, joined to the power as well as profligacy of the nobles and clergy, and the indolence of the people, have sunk the industrial arts in Portugal lower than in almost any other European state. The events connected with the late war laid the foundation of a new order of things; and a constitutional government has been established, by which feudal rights and monastic institutions have been abolished, an equal system of taxation introduced, and the country placed on the road to improvement. Still, this is of too recent accomplishment to have produced much effect on the wealth and habits of the people; want of capital, sloth, and crime, are yet conspicuous, especially in the central and southern provinces; and in most departments of industry and knowledge, this kingdom, to use the words of a recent traveller, forms "a sort of disgraceful wonder in the midst of the 19th century."

The chief rural productions are—on the high grounds, wheat, oats, barley, flax, and hemp; in the warmer districts, vines and maize; and on the low grounds, rice; while in the sheltered valleys of the S. and central parts, oranges and lemons are produced, and the olive and other fruits are grown in various places. The live-stock are principally goats, hogs, and sheep; the last mostly in Beira. The chief woods are, in the N. oak, in the central provinces chesnut, and in the S. provinces kermes, cork, and pine. Minerals are abundant, but scarcely any mines except those of iron are worked. Salt is largely produced in the bays, especially in the lagoon of St Ubes or Setubal. Manufactures, except perhaps the plate and jewellery of Lisbon, are inconsiderable: coarse woollens and linens are made in various provinces; silks near Lisbon; glass at Marinha Grande; cottons at Alcobaça and Thomar; and paper, earthenware, and other articles, in various places. There is little internal trade, owing to the limited number of carriage-roads, while the rivers are but imperfectly navigable: mules form the chief means of conveyance.

The great staple of the country is wine, particularly the red variety called port, from Oporto, the place of shipment. This wine, produced about 50 miles above that town, on a succession of low hills on both sides of the Douro, is generally divided into two sorts; the *vinho do rama*, an inferior kind for home consumption and distillation into brandy, and the *vinho do feitoria*, or factory wine, for exportation. In 1756, the government, ostensibly to prevent adulteration, made over this district to the "Oporto Wine Company," who were authorized to class the wines, and fix their maximum price. This company was suppressed as a nuisance by Don Pedro, in 1834, but it was again re-established in 1838, though with less oppressive privileges than at first, for a period of 20 years. The annual average quantity exported in the 3 years ending 1840, was 34,790 pipes; of which, 25,965 were shipped to Britain (equivalent in value to about £800,000), 3962 to Brazil, 2500 to United States, and 2363 to the N. of Europe and the Portuguese colonies. Considerable quantities of white wine are besides sent from Portugal, chiefly Lisbon, Bucellas, and Calcavella; also, though in small quantity, a strong but inferior red wine, from Figueira. [Wine.]

The principal commercial relations are with the United Kingdom, with which an intimate connexion has been maintained since the beginning of last century. This originated on the side of Britain, partly from jealousy of the pretensions of Louis XIV. to the crown of Spain, and partly from an attachment to Portugal, from her not being a manufacturing country, and likely in the opinion of the calculators of the day to be so much the more advantageous as a customer; reasons which jointly led, in 1703, to the celebrated Methuen treaty, the object of which was to favour the consumption of Portuguese wines in return for a similar preference to our manufactures. The relations then established have undergone several changes; but the deep-rooted taste for port in Britain has preserved the trade as great as ever.

The exports to the United Kingdom, besides wine, annually embrace about 100,000 packages of oranges and lemons, from 50,000 to 60,000 cwts. cork-bark; also olive-oil, sheep's wool, sumach, goat-skins, figs and other fruits, and small quantities of tallow, brandy, and other articles. The declared value of British produce and manufactures annually sent to Portugal averaged in the five years ending 1835, £1,127,664, and in the five years ending 1840 £1,115,463, being thus nearly stationary; about two-thirds consist of cotton goods; the rest chiefly of woollens, linens, iron and hardware, Irish butter, cheese, coals, machinery, and paints: a considerable portion of the British manufactures are afterwards smuggled into Spain. The imports from the United Kingdom likewise include a considerable quantity of tobacco, shellac, indigo, quicksilver, and other foreign articles. From the British N. American colonies, nearly 300,000 quintals of dried cod are annually imported, the returns for which are partly made in salt from St Ubes.

The other countries with which Portugal chiefly trades are, Brazil, from whence tropical produce is received in exchange for wine, brandy, and other articles; the several nations in the N. of Europe; the Portuguese colonies of the Madeiras, Cape de Verde Islands, Angola, and Mozambique in Africa, Goa, and Macao, which, however, are almost all declining places; and the United States. From the last-mentioned corn used to be regularly imported, but sufficient is now grown for the consumption; recently, indeed, a little has been exported. The total exports from Portugal may be estimated at about £2,000,000; and the imports at nearly the same. The foreign trade is mostly in the hands of foreigners, chiefly English, resident in Lisbon and Oporto,

Ports.—*Lisbon*, the capital, lies on the right bank of the Tagus, 10 miles from its mouth, in lat. 38° 42′ N., long. 9° 8′ W.; where the river extends into a bay five miles wide, forming one of the finest harbours or roads in the world. The town is, however, known to be the filthiest in Europe, especially the E. quarter. Pop. 260,000. Its trade has greatly diminished since the separation from Brazil; though it is still the emporium of the S. part of the kingdom. Upwards of 1000 vessels enter annually, of which about one-third are British.

Oporto or *Porto*, the outlet of the N. and most industrious provinces, lies on the declivity of a hill on the N. side of the Douro, 2 miles from its mouth, in lat. 41° 8′ N., long. 8° 37′ W., 170 miles N. of Lisbon. The river, though difficult of entrance, owing to rocks and quicksands, and rarely practicable for vessels drawing more than 16 feet, is still well adapted for trade; in front of the town it is sufficiently deep for pretty large vessels, while brigs and smaller craft can lie close to the quay; and it is navigable by barges or boats for about 100 miles. Pop. 70,000. On the opposite side of the river, between the suburbs of Villa-nova and Gaya, there are immense vaults or "lodges," where the wine is kept. Port-wine is here the great staple, but the exports of fruit are also considerable. From 80,000 to 90,000 tons of shipping enter annually, of which fully one-fourth are British. Both Lisbon and Oporto have a regular steam communication with England.

The other ports are Caminha, Viano, Villa do Conde, Aveira, Figueira, Setubal or St Ubes, on the W. coast, and Faro and Villa Nova de Portimao in Algarve.

MEASURES, MONEY, FINANCES, &c.

Measures and Weights.—The palmo (*craveiro*) of 8 inches = 8·62 Imp. inches; the pe or foot = 1½ palmo; the vara = 5 palmos = 43·11 Imp. inches; the covado, nominally equal 3 palmos, is commonly 24¾ Portuguese inches, or 26·67 Imp. inches; the braca is 10 palmos. The Portuguese league (18 to the degree) of 3 miles = 6759 Imp. yards, or 3 Imp. miles 6¾ furlongs.

The geira, land measure, = 4840 square varas; 7 geiras = 10 Imp. acres nearly.

The Lisbon almude, liquid measure, of 2 pots, 12 canadas, or 48 quartilhos, = 3·64 Imp. galls.; the baril is 18, the pipe 26, and the tonelada 52 almudes. The Oporto almude = 5·61 Imp. galls.

The moyo, dry measure, of 15 fanegas, 60 Lisbon alquieres, or 240 quartos = 22·39 Imp. bushels; and 100 Lisbon alquieres = 37·32 Imp. bushels. At Oporto, however, the alquiere = 0·465 Imp. bushel, or 100 Oporto alquieres = 46·50 Imp. bushels.

The arroba of 32 arratels or pounds (each of 2 marks, or 16 ounces) = 32·38 lbs. avoirdupois; and 100 Portuguese lbs. = 101·18 lbs. avoirdupois; the quintal is 4 arrobas; the tonelada 54 arrobas. The apothecaries' pound is 1½ mark.

Gold and silver are weighed by the mark of 8 ounces or 4608 grains = 3541½ troy grains. The fineness of gold is expressed by dividing the mark fine or other weight into 24 quilates or carats, each of 4 grains; and the fineness of silver, by dividing the mark fine into 12 dinheiros, each of 24 grains. Gold, 22 carats fine, is sold at the fixed rate of 96 milreas per mark; and silver, 11 dinheiros fine, at the fixed rate of 6 milreas per mark; the variations of price upon each being made by a premium per cent.

Money.—Accounts are stated in reis or reas; and 1000 reas are termed a milrea, which in accounts is denoted thus, 1$000. The milrea, valued in silver from the crusado novo, is worth 56d. sterling. 400 reas = 1 crusado of exchange; a million of reas (1000$000), are termed a conto.

The modern coins are:—In gold, the dobraon or ounce of 12800 reas; the half-dobraon, or johanese of 6400 reas; the half-johanese of 3200 reas; the escudo of 1600 reas; the half-escudo of 800 reas; and the crusado velho of 400 reas; which are all minted at the rate of 8 dobraons to the Portuguese mark, nominally 22 carats fine, but seldom above 21¾ carats:—In silver, the crusado novo of 480 reas, and ½, ¼, and ⅛ crusadoes; the piece of 6 vintems, or 120 reas; the testoon of 5 vintems, or 100 reas; and pieces of 3 and 2½ vintems:—In copper, pieces of 40, 10, 5, 3, and 1½ reas.

In 1835, a new coinage was ordered, making a gold crown of 5000 reas worth £1, 3s. 11½d. sterling, and a silver crown or milrea, 56¼d. sterling.

Usance of bills, from London, 30 days' sight; from Spain, 15 days' sight; from France, 60 days' date; and from Italy, 3 months' date. Days of grace, on inland bills, 15; on foreign bills, when accepted, 6, but when not accepted, they must be either paid or protested when due.

A National Bank, established 1822, with a capital of £700,000, issues notes, payable in specie.

The Finances are in great disorder. In 1838, the revenue amounted to £2,091,000, and the expenditure to £2,524,000; leaving a deficit of £433,000. The foreign debt in the same year amounted to £11,375,300; and the internal debt to £4,087,039; total, £15,462,339; the interest on which amounted to £621,448.

The foreign debt consists of various loans raised in England between 1831 and 1837, the dividends on which have been rarely paid. The "old Portuguese 5 per cents of 1823" (not included in those above mentioned) were assigned in 1825 to Brazil, by whom the interest and sinking-fund has been since regularly provided.

A Treaty with Britain, July 3, 1842, provides that the subjects of each of the two powers shall, in the dominions of the other, enjoy the privileges of "subjects of the most favoured nation;" and that there shall be reciprocal liberty of commerce and navigation; but without prejudice to the existing regulations respecting the Douro wine-trade, the exportation of salt from St Ubes, and the exclusive right of the crown of Portugal to farm the sale of ivory, orchil, gold dust, soap, gunpowder, and tobacco, for consumption in that kingdom.

All merchandise, which can be legally imported into either country from the other, in ships of that other country, shall pay no higher dues than if the shipments were effected in national vessels; and exports shall be regulated on the same principle. Farther, British ships are allowed to proceed direct from any port in the British dominions to any Portuguese colony, with the produce or manufactures of the United Kingdom or its colonies, except such goods as are prohibited or admitted only from Portuguese possessions; and such British ships and goods shall pay no higher dues than are exigible on such goods brought in Portuguese ships, or on the like goods brought from other countries in Portuguese ships. The same rights are conceded by Britain to Portugal; and similar privileges are also mutually granted by the two powers to each other in regard to exports from their colonies. The vessels of the two countries respectively shall also be permitted to discharge and lade at different ports in the other, in the same voyage inwards or outwards, as national vessels.

The treaty comprehends various other stipulations, including an agreement to take into consideration the duties now levied upon the productions of either country, with a view to their reduction; which "matter shall without delay be made the subject of a special negotiation between the two governments." It is to endure for 10 years, and further, until the end of 12 months after notice.

POSTING, or travelling by means of hired horses, is a government monopoly in almost all European countries, except Britain, where it is conducted in a much superior manner, through the competition of private parties; though, owing to taxation, at greater expense. Posting is now, however, less common in this country than formerly, owing to the extension of other means of travelling.

Duties in Britain.—Besides the carriage duty [COACH], every postmaster is required, by the act 2 & 3 Wm. IV. c. 120, to take out yearly a license costing 7s. 6d., and which expires 31st January. He must also pay 1½d. per mile for each horse let for hire; but where the distance is not greater than 8 miles, then 1-5th of the charge for hire, or 1s. 9d., at his option; and in the case of the horse not bringing back any person, and not deviating from the usual road, 1s. In respect of every horse let or used for any time less than 28 days, 1-5th of the charge for hire; or in lieu thereof, for every day not exceeding 3 days, 2s. 6d.; from 3 to 13 days, 1s. 9d.; above 13 and less than 28 days, 1s. 3d. Posting carriages must be numbered, and bear the owner's name and residence. The duties are checked by means of tickets left by the hirer or postilion with the turnpike keepers,—an account of which is taken periodically by the excise. The regulations are enforced under penalties.

In 1841, the produce of the post horse duties was £196,134, and of the licenses, £3729.

POST-OFFICE. The origin of this institution may be traced to the special messengers or "*nuncii*," who, in ancient times and in the middle ages, were employed to convey the public despatches and edicts. At a later period regular couriers were employed, and stations or *posts* assigned, between which each should pass, handing the papers from the one to the other. In the fifteenth century, regular posts were established in different parts of Europe, the benefit of which was gradually extended to private parties; and public letter offices were opened in France in 1619, and in Britain in 1635. The latter, called a "merchant post," did not prosper; but, in 1649, it was placed on a better footing by the Commonwealth; and, in 1656, further improved by Cromwell. In 1710, a general post-office was established by the act 9 Anne, c. 11, for the United Kingdom and the colonies.

The post-office, however, continued long afterwards a very imperfect institution; the mails were sent by boys on horseback,—a mode attended with delay, danger, and uncertainty; and local and cross-road posts were either still more defective, or altogether wanting. At length, the post having been outstripped, in point of despatch and safety, by the ordinary stage-coaches, it occurred to John Palmer, manager of the Bath theatre, that a great improvement might be made by contracting with the proprietors of coaches for the carriage of the mail, and binding them to perform the journey in a specified time, and take a guard for protection. His mail-coach plan was submitted, in 1782, to Mr Pitt, by whom it was zealously supported. In 1784, notwithstanding much opposition, it was carried into operation on the principal roads, Mr Palmer being, at same time, appointed comptroller-general of the post-office; and the system was thereafter gradually extended, with other improvements in regard to frequent transmission, punctuality, and speed, to almost all parts of the kingdom.

The safe and speedy conveyance of letters for the benefit of trade, was the primary consideration with the British government on the first establishment of a post-office; the revenue was held to be of minor importance: this principle is recognised in the preamble of the different postage acts which were passed from the time of the Commonwealth down to the 9th of Queen Anne. In 1710, when 1d. was added to several of the previous rates, only 4d. was charged in Britain for distances above 80 miles, and 3d. for shorter distances; and, in 1765, the rates for distances not exceeding 30 miles, were reduced to 1d. and 2d. But, in 1784, on the introduction of Mr Palmer's plan, one object of which was an augmentation of revenue, the whole were graduated between 2d. and 6d.,—rates which, owing to the exigencies of the war, were successively increased in 1797, 1801, 1805, and 1812. In the year last mentioned, the charges on general post letters in Britain were,—for distances not above 15 miles, 4d.; from 15 to 20 miles, 5d.; from 20 to 30, 6d.; 30 to 50, 7d.; 50 to 80, 8d.; 80 to 120, 9d.; 120 to 170, 10d.; 170 to 230, 11d.; 230 to 300, 12d.; and an additional 1d. for each additional 100 miles. These rates were continued until 1839. A single letter was understood to contain a single piece of paper, not exceeding 1 oz. in weight; a second piece, or enclosure, constituted a double letter; beyond, fourfold,—the postages advanced by weight. In Scotland, an additional ½d. was charged for tolls. In Ireland, the rates were mostly lower. Between Britain and Ireland, packet rates were charged in addition to their respective inland rates. The post rate in towns was 1d., except in the London district, where it was 2d. and 3d., according to distance. The exemptions from postage were, letters "franked" by members of parliament and certain official persons, a privilege coeval with the institution of the post-office; parliamentary papers; and stamped newspapers: the letters of soldiers and sailors, countersigned by their officer, were charged, after 1795, at a uniform rate of 1d.

In 1709, the gross receipt of the post-office was £111,461, and the net revenue, £56,664. In 1779, the net revenue was only about £140,000. But after 1784, Mr Palmer's improvements, and the advance of the country, led to a rapid increase; and, in 1803, the gross receipt was £1,372,979, and net revenue, £956,212. In 1815, the gross receipt was £2,323,835; the charges, £704,639, or about 29 per cent. on

£1,619,196, the net revenue. After 1815, the excessive rates of postage, combined with the greater facilities for evading them afforded through improved means of communication, prevented any further augmentation of the revenue, notwithstanding the subsequent increase of the country in wealth and population.

The following tables, abridged from the Parliamentary Report on Post-office Reform, exhibit an estimate of the documents which passed through the office in 1837, the average postage thereon, and the revenue: also an analysis of the cost of management, as prepared for the said Report in 1838:—

RECEIPTS.

Description of Letters.	No. of Letters.	Av. Postage.	Gross Revenue.
		d.	£
Generalpost, inland, above 4d.........	46,378,800	9¼	1,782,191
Do. not above 4d...	5,153,200	3½	75,151
London local post..	11,837,852	2¼	114,753
Provincial do.	8,030,412	1	33,483
	71,400,264	6¾	2,005,578
Packet and ship	3,523,572	23¼	369,340
Parliamentry. franks	4,813,448		
Official franks......	2,109,010		
Statutes	77,542		
Newspapers	44,500,000		
	126,423,836		
Unappropriated....			4,641
			2,379,559

CHARGES.

	£
1. Cost of transit in U. Kingdom:—	
Mail-coach expenses	140,985
Riding work, &c.	107,818
Packet service	30,998
Other payments	7,506
	287,307
2. Cost of P. O. establishments in U. K.	288,078
3. Foreign and colonial packets, £31,509; other foreign and colonial charges, superannuation allowances, &c. £91,738	123,247
Total charges....	698,632
Net revenue	1,680,927
	2,379,559

In computing the average rates of postage now stated, multiple letters are included and counted as single; excluding multiple letters, the average postage of inland letters, instead of 6¾d. was 6¼d.

We have furnished these details from their bearing upon the plan of post-office reform brought forward in 1837 by Rowland Hill, a gentleman unconnected with the department. He proposed, 1*st*, a low and uniform rate, instead of the then existing high and variable rates; 2*d*, increased speed in delivery; and, 3*d*, more frequent despatch. He also recommended that the postage should be charged by weight, and prepaid, at the rate of 1d. for each letter not above ½ oz.; and he afterwards proposed that the prepayment should be by means of stamps, an expedient which he says was suggested to him by Mr Charles Knight. Mr Hill's plan embraced all inland letters, to the exclusion even of parliamentary and official franks, but it did not include foreign and colonial letters.

The principle of a uniform postage is founded on the facts that the cost of distributing letters in the United Kingdom consists chiefly in the expenses incurred with reference to their receipt at and delivery from the office; and that the cost of transit along the mail roads is comparatively unimportant, and determined rather by the number of letters carried than the distance. "It is not matter of inference," says Mr Hill, "but matter of fact, that the expense of the post-office is practically the same, whether a letter is going from London to Barnet (11 miles), or from London to Edinburgh (397 miles); the difference is not expressible in the smallest coin we have." The cost of transit from London to Edinburgh, he explained to be only 1-36th of a penny. The fixing of a low rate flowed almost necessarily from the adoption of a uniform rate; it was besides essential to a stoppage of the private conveyance of letters. The post-office was thus to be restored to its ancient footing of an institution whose primary object was public accommodation, not revenue; though the loss of income from the change would, it was thought, be gradually diminished, and perhaps made up, by the increase of correspondence, commercial, literary, and domestic, arising from the reduced postage.

A general feeling having been aroused in favour of Mr Hill's plan, it was remitted by the House of Commons to a committee for investigation, in December 1837. And in 1838, the committee reported, "that the evidence taken before them abundantly proves the present high rates of postage are extremely injurious to all classes;" restricting commerce, art, and science, and the progress of education; circumscribing the operations of institutions for the promotion of religion, morality, and charity; interfering with domestic comfort; suppressing almost entirely the correspondence of the poor; and impairing habitual respect to the law by encouraging evasions of the post-office statutes. The committee, therefore, recommended increased facilities for correspondence. "Upon the important novelty of a *uniform rate*, the committee are of opinion, that that part of the inland postage on letters which consists of tax ought to be the same on all: that as the cost of conveyance per letter depends more on the number of letters carried than on the distance which they are conveyed, the cost being frequently greater for distances of a few miles than for distances of hundreds of miles, the charge, if varied in proportion to the cost, ought to increase in the inverse ratio of the number of letters conveyed; but as it would be difficult, if not impossible, to carry such a regulation into practice, and as the actual cost of conveyance (assuming the charged letters to bear the whole expense of the franked letters and of the newspapers) forms less than the half of the whole charge, exclusive of tax, the remaining portion consisting chiefly in the charges attendant on their receipt at, and delivery from the post-office, the committee are of opinion that the nearest practicable approach to a fair system would be to charge a uniform rate of postage between one post-town and another, whatever may be their distance; and the committee are further of opinion, that such an arrangement is highly desirable, not only on account of its abstract fairness, but because it would tend in a great degree to simplify and economize the business of the post-office." Lastly, the committee reported in favour of the other parts of Mr Hill's plan, confirming by official data the whole of his conclusions.

In 1839, the uniform penny-postage was adopted by parliament. A preparatory fourpenny rate for general post letters was introduced, December 5, 1839, and at same time the London district rates were reduced to 1d.; the uniform penny rate came into operation on 10th January, and stamps on the 6th May 1840.

Besides these changes, considerable improvements have of late been effected in the frequency, despatch, and speed of the mails,—the last being chiefly accomplished by the transmission of letters in all the chief routes in Britain by means of railways. The principal inland mails are sent from London (except on Sunday) twice a-day, morning and evening, instead of only once, in the evening, as formerly; and Edinburgh and Glasgow are reached in 29 hours. A considerable addition has also been made to the number of post-offices in the United Kingdom, which at present exceed 3000. So that letters are now carried, at an expense convenient to the poorest, quickly and punctually into every part of the British islands.

The following table shows the financial movement of the post-office in the four years ended January 5, 1842:—

Year to Jan. 5.	Gross Revenue.			Cost of Management.			Net Revenue.			Postage charged on the Government Departments.			Net Produce, exclusive of Charges on the Government Departments.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
1839	2,346,278	0	9½	686,768	3	6¾	1,659,509	17	2¾	45,156	0	11	1,614,353	16	3¾
1840	2,390,763	10	1½	756,999	7	4	1,633,764	2	9½	44,277	13	4	1,589,486	9	5½
1841	1,342,604	5	2	858,677	0	5¼	483,927	4	8¾	90,761	3	2	393,166	1	6¾
1842	1,495,540	9	0¾	938,168	19	7½	557,371	9	5¼	113,255	15	10	444,115	13	7¼

The net revenue is less than was anticipated by many, chiefly from the increase in the charges of management, a rise partly due to the additional expenses attendant on the conveyance of the mails since the extension of the railway system. Still, the results of the last year show the rate of the letter tax to be 59½ per cent. (the ratio of £557,371, the net revenue, to £938,168,* the cost of management), or 47½ per cent., if estimated by the net produce, exclusive of postage paid by government; and these rates are yearly increasing. The utility of the post-office, however, even as a source of revenue, is not to be appreciated solely by the amount which it yields directly to the state; it must also be viewed as auxiliary to other branches of the public income; and few can doubt the beneficial influence of Mr Hill's system upon all departments of industry, and almost every object of national policy.

The number of letters posted in the first four months of 1842 averaged about 3,130,000 a-week in England, 440,000 in Scotland, and 430,000 in Ireland; total, 4,000,000 weekly, or about 208,000,000 a-year; being 2⅗ fold or 160 per cent. more than the number in 1838 (taken at 80,000,000), notwithstanding the great depression of trade in the interval. Mr Hill estimated the probable augmentation at 5¼ fold, or 420,000,000 letters a-year, but he did not specify the time; and some of the facilities recommended by him have not yet been carried into operation. A striking circumstance, illustrative of the nature and progress of the measure, noticed in a parliamentary return, is, that the gross revenue in England under the penny rate, in the month ending January 5, 1842, was £100,383; and in the same month in 1840, under the fourpenny rate, not more than £103,623,—an excess of only 3¼ per cent., notwithstanding the great difference in the rates.

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* This does not include the charges of certain packets controlled by the Admiralty, to whose superintendence they were removed in 1837, and the expense of which is included in the Navy estimates, where they are not distinguished. On the other hand, were a strict accounting to be gone into, the post-office would fall to receive credit for the value of the stamps of newspapers distributed by it, which, taking their number at 44,500,000, as in 1837, would amount to £185,416.

In many foreign countries the postage is fixed rather with a view to public accommodation than revenue. This is the case in France, where the charge is by weight; a quarter of an ounce, however, being only allowed for each single rate. In the United States, the post-office income was not until lately equal to the expenses. But the principle of a *uniform* rate can be applied with success only in a country such as Britain, where, besides high civilisation, there is great density of population, extraordinary facilities for internal communication, and immense as well as widely diffused commerce.

The communication with countries beyond sea has been greatly altered of late years by the general employment of steam mail-packets with all but very distant places. There is daily intercourse with France, and at frequent intervals with other parts of the Continent. In 1837, steamers were established between Bombay and Suez, and letters now reach London from India, by way of Egypt, in 35 days, and sometimes sooner. In 1839, mail steamers were also established between Liverpool and N. America, which accomplish the voyage to Halifax in 10 days, and Boston in 12 days; and in 1842 another line of steam-packets opened a more rapid communication between England and the W. Indies and S. America.

Statutes and Regulations.

The Post-office Acts, passed between 1710 and 1837, were about 150 in number; but the greater part were repealed in the latter year, when the following statutes were passed for regulating the whole department, namely, the 1 Vict. c. 33, for the management of the post-office; c. 34, for the regulation of the duties; c. 35, as to franking; and c. 36, consolidating the laws relative to offences. These, again, have been to a great extent abrogated by the acts 2 & 3 Vict. c. 52, and 3 & 4 Vict. c. 96, relating to the uniform penny postage.

The Charge for inland letters, not exceeding ½ oz. in weight, is 1 postage; from ½ oz. to 1 oz. 2 postages; from 1 oz. to 2 oz. 4 postages; and so on, adding 2 postages for every oz. up to 16 oz., beyond which no packet subject to postage is received; parliamentary papers and petitions are an exception. The price of a postage is 1d. which must be prepaid either by money or the use of a stamp, or it will be charged double; and if the weight of the letter should exceed the value of the stamps attached, the excess will be charged double. Stamped envelopes are sold at the rate of 1s. 1½d. per dozen of penny, and 2s. 2d. per dozen of twopenny kinds. Letters can be registered on payment of a fee of 1s.

Colonial, India, and United States letters, when not exceeding ½ oz., are charged 1s. when sent by packet, an intercolonial rate of 2d. being besides charged on those for British N. America. Various rates are charged for other foreign letters according to the route and distance. Letters conveyed by private ships to parts beyond sea, uniformly pay 8d. These rates apply in whatever part of the kingdom the letters are posted.

Newspapers, published in the United Kingdom, pass free from one post-town to another. British and colonial newspapers also pass free to and from the colonies in the post-office packets. Foreign newspapers received in Britain, and British newspapers sent to foreign countries, are charged 2d., unless there be a convention with the foreign post-office. All newspapers must be without covers, or in covers open at the sides, and must have no other writing or mark but the address, and no enclosure. Those sent out of the kingdom must be posted within 7 days after publication.

Money Orders, for sums not exceeding £5, are granted by every post-town upon every other post-town in the United Kingdom, on application. For any sum, not exceeding £2, a commission of 3d. is charged; and those from £2 to £5 the charge is 6d.

Prior to November 20, 1840, when these commissions were fixed, the charges were much higher. This reduction, joined to the facilities of the penny-postage system, has led to a great increase in the money-order department. In England, in the quarter ended January 5, 1840, the amount issued was only £67,411; whereas, in the quarter ended January 5, 1842, it was £820,576: the number of orders issued in the latter period was 390,290; showing the average amount of each to have been £2, 2s. 0½d.

POTASH (Fr. *Potasse.* Ger. *Pottasche*), a term commonly applied to an impure carbonate of potash, obtained by the incineration of wood, lixiviating the ashes in barrels, first with cold and then with hot water, filtering the ley, and evaporating it to dryness in an iron pot. In this state, which is that of the potash of commerce, it still contains some vegetable matter not perfectly incinerated, to destroy which it is put into a crucible, and liquefied to an intense heat. The melted matter is then poured out on iron plates, where it hardens, and in this purer state it is called *pearl ash.*

Potashes occur in hard irregular masses or fragments, of a light blueish gray colour, somewhat caustic alkaline taste, inodorous, and very deliquescent. Pearl ashes are of a whitish colour and pearly lustre, and of considerably purer and finer texture and appearance than the other. These commodities are valued according to their purity, estimated generally by their easy solubility in water, two parts of which, according to Mr Brande, should entirely and easily dissolve one part of pearl-ash without the aid of heat: the residue, if any, consists of impurities.

Ashes are used in the soap and glass manufactures, bleaching and scouring of linens and woollen cloths, and dyeing; also, when refined, in medicine, surgery, and other arts. But of late years their consumption has been checked by the substitution of soda and the chlorides of lime and soda for many purposes; and the importations into Britain, formerly upwards of 200,000 cwts., do not now exceed 120,000 cwts., which, excepting a small quantity from Russia, are wholly brought from N. America, chiefly Montreal. [CANADA.]

POTATO (Fr. *Patate*. Ger. *Kartoffel*. Por. *Batata*. Sp. *Patata*), "the most precious gift of the New World to the Old," appears to have reached the Continent from Spanish America; though it is said to have been first brought to Britain from Virginia by Raleigh in 1586. It is, however, only within the last 100 years that its cultivation has become general. The plant (*Solanum tuberosum*), valued solely for its esculent tuberose roots, has a very wide range of soils and temperature; but dry, light ground is that best adapted for it. The varieties are usually distinguished into the early and the late; the former, except in the vicinity of large towns, raised chiefly in the garden, the latter in the fields: there are, however, intermediate kinds. All are commonly propagated from the tubers; those reared from seed taking several years before their roots obtain the full size. The *sets* are usually planted in spring; from 8 to 10 cwts. are required to the acre; and the crop varies from about 5 to 10 tons, according to soil and culture. The roots are taken up in dry weather, when they are either stored or preserved in heaps or pits covered with earth, as a defence against frost, and to prevent putrefaction. Besides its ordinary use as human food, the potato is employed in rearing live-stock, and in distillation. Its fecula, wanting gluten, does not undergo the panary fermentation, but it may be so mixed with wheat-flour as to produce good bread, and it is applicable to other purposes of domestic economy, while the use of its starch is extending in various forms. It grows exempt from most of the hazards as to weather to which other crops are subject; and it is liable to few diseases: the most dreaded are the *curl*, an imperfect formation of the tubers, indicated by the curling of the leaf; and the *dry-rot*, or decay of the set; both unexplained. It can be cultivated on a small as well as a large scale; is under every system of agriculture a beneficial object; and produces more nutriment upon the same extent of ground than any other plant cultivated in the temperate regions. It may thus be regarded as the banana of the temperate zone. It now forms a great part of the food of the inhabitants of Europe; and its introduction as a supplementary crop has greatly lessened the hazards of famine. Mr Cobbett and others have asserted that its use in Ireland, where it forms the principal article of food, has been attended with pauperizing effects; but the same remark may be made upon the dependence of the Hindoos upon rice. The entire reliance of the peasantry of Ireland and India upon the cheapest species of food is merely one of many indications that these fertile countries are in an unhealthy state of indigence.

The import duty on potatoes, formerly 2s. per cwt., has been reduced (1842) to the nominal rates of 2d. per cwt. from foreign countries, and 1d. from the colonies. This change may perhaps lead to shipments to London from the adjoining parts of the Continent; but it is impossible that a cheap bulky article, raised every where with facility from the poorest soils, can become an important object of external commerce.

POULTRY. The rearing of domestic fowls forms an important branch of rural economy among small farmers and cottagers, especially in the vicinity of large towns. In Surrey, Sussex, Essex, Cambridge, Norfolk, Suffolk, and Berkshire, however, the rearing and fattening of poultry for the London market is thought worthy of attention by considerable farmers. At Wokingham, in Berkshire, the metropolitan dealers sometimes pay £150 to the feeders in that neighbourhood in a single market-day. Reigate and Dorking are also large poultry markets. The present Earl Spencer, some years ago, instituted a poultry show at Chapel Brampton, in Northamptonshire. As it is always desirable to have a standard in view, raised as high as the most approved system will carry it, we give the weight of the fowls which gained the prizes awarded in 1829:—The best turkey weighed 20 lbs. 4 oz.; capon, 7 lbs. 14½ oz.; pullet, 6 lbs. 3½ oz.; goose, 18 lbs. 2½ oz.; couple of ducks, 15 lbs. 10 oz. The production of animal food by domestic fowls is much greater than is commonly imagined. Mr Lawrence, in his treatise on poultry, states, that from five Poland hens he obtained, in 11 months, 503 eggs, weighing, at the average of 1 oz. 5 drams each, 50½ lbs. The feathers of domestic fowls form an object of considerable trade, especially between Ireland and England.

POUNCE. [Cuttle-Fish. Sandarach.]

POUND, the integer of weight in most European countries, seems originally to have been derived from the Roman pondus, or libra of 12 unciæ, though the latter was less than most of the pounds now in use, being, according to Paucton, only 5174 troy grains. In the middle ages, the weights were rude and variable. It was one of the concessions by King John in the Magna Charta, that there should be uniformity in this respect; and not long afterwards a statute, 51 Henry III., ordained that an English penny, called the sterling, should weigh 32 dry wheat grains, that 20 pence should make an ounce, and 12 ounces a pound. At a later period, the number of grains in the penny was reduced to 24, making 5760 grains in the standard pound; which, under the name of Troy weight, was first used at the Mint in 1526, instead of the ancient Moneyer's or Tower pound of 5400 grains. The Troy pound has ever since been the English standard, though its use has been confined to the precious metals; the avoirdupois pound of 7000 troy grains having been for several centuries that generally used in commerce. [Coin. Measures.]

POUND (Lat. & Sp. *Libra*. It. *Lira*. Fr. *Livre*), the ancient money integer in most parts of Europe, was at first a pound weight of silver, from which 20 shillings were coined, or 240 pence. This mode of reckoning, supposed to be of Roman origin, was introduced into modern Europe by Charlemagne, who divided the livre into 20 sous, and each sou into 12 deniers. It was established by William the Conqueror in England, where it has been continued down to the present time, though in almost every other part of Europe it is now superseded by the decimal system. [Coin. Money.]

PREMIUM (Lat. *Præmium*, reward), is justly defined by Dr Johnson to be "something given to invite a loan or a bargain." In commerce, however, the term is not used very consistently. Thus, while the premium on the share of a joint-stock company is understood to be the sum given for it *above* its original value or par, the premium of an insurance is the *whole* consideration granted by the party protected under the contract.

PRESCRIPTION, in Scotland, is employed in the sense in which limitation is used in England, viz. to express that operation of the lapse of time by which obligations are extinguished or titles protected. There are various kinds of prescription.

The *long prescription*, as it is termed, viz. the lapse of 40 years, sweeps away all unimplemented obligations. (Act 1617, c. 12.)

The *vicennial* or *twenty years' prescription* protects parties from action on obligations holograph, or in the handwriting of the granter, unattested, and on books of accounts. But the verity of the document may be referred to the writer's oath. (Act 1669, c. 9.)

The *septennial prescription* relieves cautioners after the lapse of seven years from the date of their undertaking. If the cautioner appear on the bond as a principal, he has the benefit of the act only if there be a clause of relief in the bond, or a bond of relief intimated to the creditor. (Act 1695, c. 5.)

The *sexennial prescription* protects parties from action on bills of exchange and promissory notes, after the lapse of six years from the day of payment. Bank-notes and post-bills are excepted. Though the document is thus rendered unavailing, the original debt may still be proved by the writ or oath of the debtor. (12 Geo. III. c. 72, § 38-41; 23 Geo. III. c. 18, § 55.)

The *quinquennial* or *five years' prescription* precludes action on bargains as to sale, letting, and hiring, and such like contracts as to moveables not constituted by writing. (Act 1669, c. 9.)

The *triennial* or *three years' prescription* applies to tradesmen's accounts and servants' and artificers' wages, and has been stretched to include professional remuneration and the salaries of persons acting as mandatories or agents. In the case of salary or wages the amount due at each term runs a separate prescription. In the case of accounts, the prescription runs from the last article of the account. The presumption on which it proceeds is, that the debt has been paid within the three years; but the creditor retains his right, if he prove by the oath of the debtor, or by a document under his hand, that the debt is unpaid. (Act 1579, c. 83.)

PRESENTMENT, in the Law of Bills of Exchange. It is incumbent on the holder of a bill to present it in certain cases for acceptance alone, and in all cases for payment, or for acceptance and payment together. It is necessary that bills payable a certain period after sight be presented for acceptance, that the point from which the time runs may be fixed. In other cases it is not necessary to present for acceptance until the final presentment for payment; but it is in all cases prudent, as, on acceptance, the paper acquires superior negotiability, and, on dishonour, the drawer and indorser become immediately liable. The only rule as to the time of presenting bills, payable at a certain time after sight, is, that it must be "within a reasonable time." Of this "reasonable time" no better account can be given than that the law sanctions what is established by the usage of trade in each class of cases. Presentment for acceptance should be made at the place of abode of the drawee, or, if he be a man of business, at his place of business. It is the duty of the holder to use every reasonable means to discover the drawee, if he has left his prior residence or is otherwise difficult of access. The bankruptcy of the drawee is not notice of dishonour, and cannot excuse want of presentment. If a bill has been presented for acceptance, and dishonoured, and the dishonour notified, the holder is not required to present again for payment to preserve his recourse. If an acceptance is qualified, as by naming a place of payment, the qualification must be attended to in the presentment for payment. By 1 & 2 Geo. IV. c. 78, if we accept a bill "payable at the house of a banker or other place, without further expression in his acceptance, such acceptance shall be deemed and taken to be, to all intents and purposes, a general acceptance of such bill; but if the acceptor shall, in his acceptance, express that he accepts the bill, payable at a banker's house or other place only, and not otherwise or elsewhere, such acceptance shall be deemed and taken to be, to all intents and purposes, a qualified acceptance of such bill, and the acceptor shall not be liable to pay the said bill, except in default of payment, when such payment shall have been first duly demanded at such banker's house or other place." It is to be observed that this statute refers merely to the responsibility of the acceptor; with regard to that of the drawer and indorser, it has been decided, after much discussion, that a bill must be presented wherever it is accepted payable, to secure recourse (Gibb *v.* Mather, 1832; 2 Crom. & Jerv. 254). Where a place of payment is inserted in the body of the bill, it must be there presented, to preserve recourse. The bill must be presented at proper business hours, and on this point the usage of the place and profession must be kept in view; but it will effectually meet any objection on the ground of untimely hours, to show that there was an authorized person on the spot, who, when the bill was presented, refused to honour it. Drawers and indorsers are discharged from liability, unless a bill be presented for payment on the proper day. (*Bayley on Bills*, 216-252. *Chitty on Bills*, 272-280, 353-391.)

PRICE, the exchangeable value of any article estimated in money. The price of any commodity is, in the general case, permanently regulated by the quantity of labour and capital expended in obtaining it at the original storehouse of nature; in other words, by the cost of production, including, of course, the ordinary or average rate of profit. This is called by Adam Smith the natural price of a commodity. The actual or market price, at any particular time, is influenced by the existing proportion between supply and demand; and is subject, as this proportion varies, to perpetual fluctuations; but the cost of production constitutes, as it were, a centre, to which it has a constant tendency to approach. Whenever it sinks below this point, production, having its expenses no longer repaid, is discontinued, and the supply of commodities diminished, until their value become again sufficient to pay the labour and capital necessary to bring them to market. On the other hand, if the market price should at any time be elevated above the cost of production, labour and capital will, according to the invariable laws of competition, be drawn to the production of the articles which had acquired this extraordinary value, and the supply will be increased until their market price fall back to its natural level.

The cost of production, however, though in ordinary circumstances, and for any moderate period, nearly stationary, is yet by no means fixed. The invention of new processes, improvements in skill and machinery, discovery of readier sources of supply, and diminution of expense of transportation, all operate by insensible degrees in lowering the cost of many articles; while an opposite effect will be produced by all those circumstances which cause an increase in the labour of procuring them. In general, it has been observed that there is a natural tendency in objects of manufacture to diminution of cost: the rudest machinery is of course first employed; by progressive improvements, to which no limit can be assigned, it is rendered more and more capable of yielding a greater quantity with the same expense; and the competition of capitalists invariably reduces the price of every commodity to the sum which the least expensive method necessarily requires for its production. But in agriculture, on the contrary, the natural tendency is to increased cost; there the finest machinery, that is the best soils, are first used; and recourse is afterwards had to inferior soils, requiring greater labour to produce the same supplies. Improvements in cultivation are only a temporary check to this progression; for the stimulus which they at the same time communicate to population, and the natural tendency of mankind to increase beyond the means of subsistence, is ultimately certain, by forcing recourse to poorer lands, to raise prices.

These principles are generally applicable to all commodities which can be obtained in indefinite quantities; a class forming the great bulk of those which are objects of commerce. But sometimes particular accidents, sometimes natural causes, and sometimes legislative regulations, keep the market price of many commodities a good deal above the real cost. Thus, choice wines produced only in limited quantities by certain vineyards, curiosities, antiques, and some minerals, possess from their rarity a value altogether independent of the cost of production. Again, the possessors of "secrets in manufactures," of patents for inventions, or of trading monopolies, may, by keeping the market constantly understocked, by never fully supplying the effectual demand, sell their respective commodities much above the natural price, and raise their emoluments, whether they consist of wages or profit, greatly beyond the natural rate. And the exclusive privileges of corporations, statutes of apprenticeship, and all those laws which restrain in particular employments the competition to a smaller number than might otherwise go into them, have the same tendency, though in a less degree.

"The price of monopoly," Adam Smith remarks, "is upon every occasion the highest that can be got. The natural price, or the price of free competition, on the contrary, is the lowest which can be taken, not upon every occasion indeed, but for any considerable time together" (*Wealth of Nations*, b. i. c. 7). But neither the difference between the two, nor the fluctuations in price of freely produced articles, occasioned by derangements in the balance of supply and demand, are uniform in degree with the quantities brought to or withheld from market. Thus, if double the usual quantity of goods is brought to market, it does not necessarily follow that the price will fall one-half, or that if only one-half the usual quantity is supplied, the price will be raised twofold. The proportional differences of price will in some commodities be less, in others greater; depending chiefly upon whether the article is a luxury or a necessary, of a durable or perishable nature, portable or bulky, of partial or general use, readily or not readily supplied by others; and according to the degree in which these and other qualities are combined. An excess in the importation of ripe oranges, for example, will occasion a much greater competition among sellers, and consequently a greater fall of price, than the same excess in the importation of timber; while, again, the fall of price on the latter will be greater than in the case of an equal excess in the supply of cochineal, silver, gold, or any other portable commodity in universal demand, which can be easily re-exported.

But there is no commodity upon which the effect of quantity on price is so considerable as corn. In the case of a deficient crop, the struggle of every one to get his accustomed share of that which is necessary for his subsistence, and of which there is not enough, or so much as usual, for all, produces an advance in price very much beyond the degree of the deficiency. Gregory King estimated that a defect of one-tenth in the harvest raised the price three-tenths above the common rate, that a defect of two-tenths produced a rise of eight-tenths, and so on. But though no such strict rule can be deduced, Mr Tooke thinks "there is some ground for supposing that the estimate is not very wide of the truth, from observation of the repeated occurrence of the fact, that the price of corn in this country has risen from 100 to 200 per cent. and upwards, when the utmost computed deficiency of the crops has not been more than between one-sixth and one-third below an average, and when that deficiency has been relieved by foreign supplies." The effect of abundance in depressing the price is not calculated to be in the same ratio as that of deficiency, as a portion of the excess may be held over. Still, "as a general position," says Mr Tooke, "it may be safely laid down that an excess of the supply of corn is attended with a fall of price much beyond the ratio of excess; and that the larger quantity consequently will yield a less sum of money than the smaller quantity." (*History of Prices*, vol. i. p. 11-20.)

Yet the general tendency of the mutual competition of buyers and sellers in all mercantile communities is to preserve both price and quantity from great and sudden fluctuations. Thus, when supply exceeds demand, and the price of a commodity is lowered, individuals are always to be found ready to employ their funds and credit in purchasing a portion of the surplus, with the view of retaining it and realizing a profit when the altered relation of supply to demand shall have led to an enhancement of price; which, again, is through this operation rendered less excessive than it would otherwise become. The regularity and utility of this equalizing process in the corn-trade has been already noticed. [CORN.] It sometimes happens, however, that speculations, instead of limiting the vibrations of price, render them more irregular, and force them to wider extremes. This is generally produced through miscalculation, acted upon by a loose and expansive system of credit, under the influence of which many are encouraged to leave their own track and compete with the proper dealers in a commodity as speculative purchasers of it. The excitement then produced too often changes the sober industry of the merchant into the feverish ardour of the gambler; means are strained and responsibilities stretched in effecting purchases, until prices having reached an extravagant height, a general attempt is made to realize the golden dream by selling. A recoil then takes place, the whole illusion is dissipated, and, in a market glutted with the stocks of the needy or ruined speculators, the fall of price becomes as excessive as its previous elevation. Occasional over-speculation, and indeed overtrading of every kind, are inseparable from the existence of credit; but their frequency and extent will, doubtless, be lessened by the advancement and diffusion of commercial knowledge; even now, their effects would be greatly modified were it more generally kept in view that almost every kind of business is in the hands of established traders, too vigilant to overlook any opportunity of emolument, and who have much better means of information than temporary interlopers.

Alterations in the Value of the Currency have only a nominal influence on prices. If by the paring or abrasion of the coin, or an excessive issue of paper, the value of money is depreciated to the extent of one-half, two pounds, two dollars, or whatever may be the integer of account, will be required to be given where one was before sufficient; but this will not change the relative value of one commodity to another, as all will be affected by the depreciation in the like degree; and a bale of cotton, hogshead of sugar, and bushel of corn, will continue to preserve the same exchangeable ratio to each other. The alteration takes longer to reach some commodities than others, so as to occasion a rise in their price. But in the general case, a depreciation of the currency, in reference to particular things only, cannot be supposed, any more than a rise of the tide in reference to particular objects on the shore, and not to all. Similar observations are applicable to the fall of prices consequent on raising the metallic standard, or contracting the paper issues. It is obvious, however, that though alterations in the currency do not affect the proportional value of one commodity towards another, they must produce injustice in reference to all existing contracts; defrauding the creditor in the case of a depreciation, and the debtor in the case of an enhancement of its value. [ASSIGNATS. MONEY.]

A sudden increase of bank accommodation, it may be observed, tends to raise prices by augmenting the number and power of purchasers, and thus stimulating their competition; while an opposite effect will be produced by the contraction of such accommodation. But disturbing influences of this kind, though often confounded with expansions and contractions of the currency, are in truth rather the action of capital; and their effects upon prices are principally confined to particular localities or branches of business. So long as paper-money can be converted into specie of the mintage standard on demand, any expansion or contraction which would reduce or enhance the value of our currency, compared with that of other countries, would be speedily corrected by the operation of the foreign exchange. Some alteration would of course be produced before the remedial process could be accomplished, but its effect upon prices in general would be scarcely appreciable.

PRICE-CURRENT, a list showing the market prices of commodities.

PRIMAGE, a petty allowance on the freight or cargo of a ship, forming a perquisite of the master.

PRINCE EDWARD ISLAND, a province of British America, is situated in the S. of the Gulf of St Lawrence. Area, 2157 square miles. Population 40,000, chiefly of Scotch origin. The constitution, like that of the adjoining colonies, comprehends a lieutenant-governor, council of nine members, and house of assembly of eighteen.

The island, crescent-shaped, deeply indented by bays and inlets, and having an undulating surface, is rather fertile, with a climate resembling, but superior to, that of Lower Canada and Nova Scotia. The chief object of industry is agriculture, on which of late years considerable improvements have been effected; and a surplus of corn, potatoes, and cattle, are now reared for the supply of

Newfoundland, Nova Scotia, and New Brunswick; from whence British and foreign manufactures, spirits, tea, sugar, and other articles, are imported in exchange. The exports to Britain are confined to a small quantity of timber. Shipbuilding is pursued to some extent; but fishing has never risen into importance. In 1835, the total imports amounted to £61,155; whereof N. American colonies, £50,290; Britain, £10,191; Br. W. Indies, £621; foreign countries, £52: And the exports to £47,216; of which, N. American colonies, £38,223; Britain, £8331; foreign countries, £603; Br. W. Indies, £58. In 1837, the shipping inwards amounted to 381 vessels, 23,578 tons; outwards, 426 vessels, 29,615 tons. The difference between these numbers is occasioned by the departure of new vessels, and the return of others in ballast, of which no account is taken. Charlottetown, the seat of government and chief port, is situated in Hillsborough Bay; it possesses a good harbour.

The colonial currency is nominally what is called Halifax currency [CANADA]; but the exchange on London is commonly about 30 per cent. The revenue in 1836 amounted to £11,513; and the expenditure to £8010.

PRINCIPAL AND AGENT.—An agent, in the widest acceptation, means a person employed to transact any description of business for another, the person so employing him being termed the "Principal." An attorney employed to transact law-business, is called his employer's agent. There are several commercial persons, whose duties and rights are in most instances explained under separate heads, who possess more or less of the character of agency, such as factors, brokers, superintendents of works, confidential clerks or managers, shipmasters, bank-officers, holders of *del credere* commissions, and commercial agents.

Constitution of the Contract.—An agent may be constituted by direct writing, or his authority may be implied from his situation. In some cases the former description of appointment is necessary. In England, a corporation cannot appoint an agent otherwise than by its common seal, except for inferior duties, or to do acts in the ordinary routine of the business of the corporation. To enable an agent to bind his principal by a deed under seal, he must be appointed by a similar deed. There are certain transactions as to real property, as enumerated in the Statute of Frauds (Ch. II. c. 3, §§1, 2, 3), which by that act cannot be performed by an agent unless he hold authority in writing. There are other contracts for which the Statute of Frauds enforces writing by the party or his agent, but for which the authority of the agent does not require to be in writing. Authority to accept, draw, and indorse bills per procuration, may be given verbally. [BILL OF EXCHANGE.] Commercial agents receive the most ample and important powers by simple letter, which may either be general, authorizing them to conduct a particular line of business, and to perform the train of transactions connected with it; or specific, and applicable only to some named transaction; as, where a merchant employs a commission-agent to sell or purchase a particular lot of goods. Implied agency arises from the position of the parties; a slight circumstance will resolve the contract of master and servant into that of principal and agent, in as far as respects third parties. If the master have allowed his servant to buy for him on credit, he is answerable for what the servant may buy, though without his authority, if it be in the line of transactions which the servant was permitted to enter on, and if the dealer was not warned of the want of authority in the particular case. Other limited authorities may likewise be extended by implication. "Thus, a broker employed to purchase, has no authority, as broker merely, to sell for his principal. But if the principal has allowed him to clothe himself with the apparent ownership, or has given him the power of disposition, he cannot afterwards reclaim the goods from a third person, to whom the broker has made an unauthorized sale of them" (*Paley*, 167). The authority to draw, accept, and indorse bills, and even to grant guaranties (though this is an extreme case), may be presumed from circumstances implying the principal's recognition of such a course. In all cases, the extent of the sanction will be for the consideration of a jury. The implied agency may continue after the parties have ceased to have connexion with each other, unless there is notice of the change, or from the time which has intervened since previous transactions. Strangers are not entitled to infer without inquiry that the connexion continues. Where a person authorized to draw bills was dismissed, it was ruled "that if he draw a bill in so little a time that the world cannot take notice of his being out of service; or if he were a long time out of service, but that kept so secret that the world cannot take notice of it; the bill in those cases shall bind the master" (*Harrison*, 12 *Mod.* 346). An act done in the way of agency by one not duly authorized, will be confirmed by any act of assent on the part of him for whom he acts.

Authority of Agent.—Where the authority of the agent is limited, he cannot bind his principal beyond it; but authority may be enlarged as well as created by implication, as above. Authority to do particular acts is held to include the power of using the necessary means of accomplishing them. Thus, an authority to sue for, receive, and recover a debt, includes an authority to arrest the debtor; and a broker employed to effect a policy may adjust the loss, and refer it to arbitration; but authority to collect, discharge, and compound debts, does not authorize the agent to negotiate bills received in payment. In pursuance of an old doctrine of the civilians, that a delegate cannot delegate his authority, an agent cannot depute his duty to another, unless specially empowered to do so. Written instructions receive a strict interpretation, but they are viewed through the medium of the usages of trade and the necessity of the case. Thus, where one left in Britain a letter of attorney, containing extensive powers to buy and sell, and do "all and singular such further and other acts, deeds, matters, and things, as should be requisite, expedient, and advisable to be done," with special power to "indorse, negotiate, and discount, or acquit and discharge the bills of exchange, promissory notes, or other negotiable securities, which were or should be payable to him, and should need and require his indorsement," it was held not sufficient to authorize the raising of money by acceptances; nor in the same case was another power by which the granter authorized his agent, "for him and on his behalf, to pay and accept such bills of exchange as should be drawn or charged on him by his agents or correspondents as occasion should require," of avail as to the acceptance of a bill which had not been drawn by one who was his agent to that effect (Attwood *v.* Munnings, 7 B. & C. 278). But on the other hand, where an agent was employed to proceed with and complete extensive mining operations abroad, implying a large and not easily pre-defined outlay of capital, he was found entitled to raise money by drafts after having exhausted a letter of credit (Duncarry *v.* Gill, 1 M. & M. 450). The agent's authority as respects third parties is measured by the duties he has to perform, as interpreted by the usages of trade. For example, he may be appointed to transact a certain description of business, and be particularly instructed not to perform certain acts which are understood in ordinary practice to accompany his duties. In such a case, when he accounts with his principal he is responsible for strict adherence to his instructions; but the public are entitled to rely on his holding the authority generally accompanying his situation; and those who are not specially aware of the contrary, will be safe in so dealing with him. Such is the case where the appointment is of a general nature, as that of a broker, a factor, an attorney. Persons receiving these designations are entitled to do all things consistent with the duties of their offices, unless they are restricted; and the public are entitled to view them as unrestricted, unless the contrary be known. The duty of a factor being to sell, it has been held that he can sell on credit in those trades where such is the usual course of dealing; but it was found that he could not pledge; and a special act (6 Geo. IV. c. 94) was required to enable such a person to do so. [FACTOR.] But when the authority is special to do a particular act, or where the agent is doing that which is not a part of the duties of his situation in a commercial sense, those who deal with him must examine his powers, and the principal is not answerable if he exceed them. The distinction has been thus stated in regard to the sale of a horse:—"If a person keeping livery stables, intrust *his servant* with a horse to sell, and direct him *not* to warrant, and the servant did nevertheless warrant him, still the master will be liable on the warranty, because the servant was acting within the general scope of his authority, and the public cannot be supposed cognizant of any private conversation between the master and the servant: but if the owner of a horse send a stranger to a fair *with express directions not to warrant the horse*, and the latter act contrary to the orders, the purchaser can only have recourse to the person who actually sold the horse, and the owner is not liable on the warranty." (*Opinion in* Venn *v.* Harrison. *Paley*, 203.)

Agent's Obligations.—The first duty of an agent is to follow his instructions, and where he has received none, this duty resolves itself into an adherence to the proper practices of trade in the capacity in which he is employed. Every breach of his authority is at the agent's own peril, though done with the intention of benefiting his principal. If it be unsuccessful, he is responsible; if it be successful, the advantage is reaped by his employer. But if the principal take the benefit of an act transgressing his instructions, he adopts it, and exonerates the agent. The latter is bound to exert all care and diligence in the execution of his trust, and to use all means consistent with honesty for benefiting his employer. He is not, however, bound to sacrifice his own interest in paying that minute attention to the affairs of his employer which may gain for him petty advantages at larger sacrifices of his own. The usual definition of what is expected of him is, that he shall treat his employer's affairs as if they were his own, and do corresponding justice to them according to their importance. It would not, however, relieve an agent from the consequences of neglecting the affairs of his principal, to prove that he had been equally careless of his own; the diligence required of him is that which a prudent man takes in his own affairs. [BAILMENT.] If an agent undertakes a task requiring skill and experience, he is responsible for possessing the requisite amount of these qualities. An agent cannot be bound to perpetrate a fraud for his employer, —thus, where an agent employed to sell by auction, was privately instructed not to sell under a certain sum, and in breach of the instruction, but in obedience to law, sold to the highest bidder, he was found not responsible (Bexwell *v.* Christie. *Cowp.* 395). It would have been otherwise had the instruction been to *set up* at a certain price. In selling, an agent should, if not instructed, obtain the best price which can be got. Unless he hold a *del credere* commission (which see), he is not responsible for the credit of the purchaser. If he knows of the insolvency of the purchaser, he becomes liable if he nevertheless give credit; and if an agent, selling to a person notoriously in discredit, gives credit on the part of his principal, but takes ready money in his own personal dealings, the presumption against him will be very strong. In purchasing, if the agent deviate in price, quality, or kind, from his instructions, the purchase must go to his own account, unless his employer adopt it; and it is said that if the principal has advanced money on the goods, he may dispose of them as if he were agent for the agent, if he be at such a distance that they cannot easily and safely be restored. But the principal must make his election speedily, for he will not be entitled after delay to return the goods upon the agent's hands. An agent ought not to place himself in a situation where he has an interest adverse to that of his principal; and there are many circumstances under which, if he do so, he will be liable to make good the real or presumed injury occasioned. An agent employed to sell cannot be himself the purchaser, nor can one employed to purchase be the seller. An agent employed to purchase cannot buy goods at wholesale, and take the retail profits, though he show that his employer pays no more than he would have done had he employed another person. "If, being a factor, he buy up goods which he ought to furnish as factor, and instead of charging factorage-duty, or accepting a stipulated salary, he take the profits, and deal with his constituent as a merchant, this is a fraud for which an account is due" (*Opinion of Lord Thurlow in* East India Company *v.* Henchman. 1 *Ves. jun.* 289). An agent ought to give early notice of his transactions, according to their nature and importance; what is a due fulfilment of this duty will generally depend on the circumstances of the particular case, and the custom of merchants. The agent must pay over monies received to his principal without undue delay. It is said that if an agent has received only part of the price, he cannot be pursued for the money until the transaction is closed, unless the defalcation be owing to his own fault, as he cannot have recourse to several actions where there is but one cause of action (Varden *v.* Parker, § 3. *Espinasse,* 710); but the doctrine must be modified by circumstances connected with the probability of the purchaser making farther payments. If the agent take credit for the price in account with the purchaser, he is precluded from pleading that he has not received it. The agent is responsible for the money which he receives, but he is not so for its being absolutely realized to his constituent, if he have taken the proper and customary method of making it over to him. If it is customary in the profession to purchase the bills of persons apparently in good credit, or to lodge the money in a bank, and if, on either of these plans being adopted, the maker of the bill or the banker fail, the agent will not have to make good the loss. If an agent, however, place the money so paid him in a bank, without any mark to show that it is his constituent's and not his own, and the bank fail, he will be responsible, because he cannot be permitted to pitch upon any sum of money lodged in his own name, as the money of his constituent, when the person responsible for it has failed. It is an agent's duty to keep clear accounts of his transactions for his employers, making them carefully distinct from his own. "Where an agent had for many years neglected to keep accounts, and had withheld part of his principal's money, an injunction was granted to restrain the transfer of the whole of certain stock discovered to have been invested in his own name, till he should distinguish on oath how much of it was bought with the money of his principal" (*Paley,* 48). But where a considerable time has elapsed, the natural presumption (if there be nothing to contradict it) will be, that an account has been demanded and rendered. Agents must hold any interest they receive on the money of their principal for his behoof, unless where it is the practice for such interest to form part of the agent's remuneration. Agents are not in general liable for interest of money lying dead in their hands; but some classes of agents are bound to invest the monies paid to them.

The Agent's Rights.—The agent is in the general case entitled to commission or remuneration for his exertions. This is either ordinary or *del credere;* and where none is stipulated, the usage of trade will fix the amount. It is said that "if there be no contract, express or implied, and no usage, of course no commission can be received" (*Lloyd's Paley*, 101). Where a person performed services for a committee, under a resolution entered into by them, "that any service to be rendered by him should be taken into consideration, and such remuneration be made as should be deemed right," no action lay, as the resolution was held to import that the committee were arbiters in the matter. By 12 Anne, st. 2, c. 16, § 2, the rate of commission for any broker or solicitor procuring a loan is limited to 5s. per £100; and by 17 Geo. III. c. 26, the commission for procuring a loan upon annuity is restricted to 10s. per £100. Where a solicitor lends his own money, he is held not entitled to commission; nor has an agent any claim for commission on an illegal consideration. In other words, if, in stating the services for which he demands remuneration, he has to state the performance of an illegal act, he will not be remunerated, though his principal may have got the benefit of it. Thus, where a person holding an office in the customs, employed another to sell the office, promising him a per centage, the person so employed was not allowed to recover the reward (Stackpole *v.* Earl, 2 *Wils.* 133). But unless the illegality be clear on the face of the transaction, the employer will not relieve himself by proving that illegal acts were covenanted to be performed in connexion with it. Commission may be forfeited as damages for mismanagement. Besides their commission, agents are entitled to be repaid the disbursements proper to the performance of the duties confided to them, and especially those necessary for the preservation of the property in their hands. Agents are not in the general case entitled to insure, unless justified by usage or special direction; but it is said, on the authority of Mr Justice Buller, that "if an agent, acting for the best, but without orders, insure a cargo on account of the lateness of the season, or other good cause, he is entitled to charge the principal with the premium" (*Paley*, 108). What payments of agents are to be reimbursed becomes often a question of great nicety. Where the authority is doubtful, the advantage to the principal must be clear; and an agent, however good his intentions, will not be reimbursed for payments to which, in mistake, he believes his employer to be liable. An agent is not entitled to take upon himself the payment of the debt of his principal, for the sake of his own credit, unless he have guaranteed it. Nor is he entitled to recover the expense occasioned by his own blunder; and action is decided on for the expense attending an illegal transaction, on the principle which regulates commission in a similar case. To enable them to make good their demands, factors and other agents having property in their hands, have a lien thereon for their commission and costs. [Lien.]

Principal's Responsibility to Third Parties.—In enforcing any contract entered into by his agent, the principal is subject to any objections arising from the conduct of the agent, in the same manner as if he had acted similarly for himself. When an agent deals as if he were a principal, a purchaser is entitled to set off the price of a purchase against a debt due to himself by the agent. Where a purchaser is not aware of the merely representative character of the agent, he is safe in paying to him as a principal. Where the agent holds a *del credere* commission, the purchaser may pay him, though he have received notice to the contrary from the employer; and where the agent has a lien on a balance, the price amounting to such balance may be paid him. The claims of the principal against third parties in such cases will depend upon the nature of the agency, and on how much room there may be for the presumption that the agent is acting for himself. In this respect a factor, who has goods in his possession, and may appear to be the absolute owner, is in a different situation from a broker who is not intrusted with possession. The principal has action against third parties who have wrongfully come into possession of his property through the agent's fraud or mistake; it would appear that in the former case he is entitled to recover when the circumstances are such that, if the mistake had been committed by himself, he would recover, and in the latter only against a participator in the fraud. The properly authorized acts of the agent, between the principal and third parties, are in the eye of the law the acts of the former. Delivery to the agent is delivery to the principal, and bars stoppage *in transitu* (which see); but a person who has charge of the goods for the mere purpose of facilitating their conveyance from place to place, is not an agent to this effect (*See Paley on Principal and Agent, from which this article is in great measure abridged*). [Broker. Del Credere. Factor.]

PRIVATEER. [Letter of Marque.]

PROMISSORY NOTE, is a written engagement by one party to pay money to another at some certain time, fixed or ascertainable. Promissory notes bear so close an analogy to bills, both in the nature of the document and its privileges and requisites, that the law regarding both is generally treated under one head. In referring for information to the article Bill of Exchange, it will be necessary to recollect these distinctions,—that in the case of a note there is no party subsidiarily liable as drawer; that the document is a simple obligation between two parties, the one engaging to pay the other; that there is no room for the preliminary obligations of presentment for acceptance, or notice of non-acceptance; and that there is no discountable document created upon the credit of the payee, previously to the obligation of the payer, who, in a promissory note, is generally denominated the maker. The document does not admit of the same breadth of application, nor consequently require so extensive a legal machinery for giving it efficacy. There is no room for the distinction between foreign and inland with regard to promissory notes; but the payee in a promissory note may put himself in the position of a drawer by indorsement, and then the document becomes, like a bill, an instrument which has value on the credit of some party besides the original debtor. The privileges of bills were conferred on promissory notes by statute;—in England, by 3 & 4 Anne, c. 9, § 1; in Scotland, by 12 Geo. III. c. 72, § 36; and in Ireland, by the Irish statute, 8 Anne, c. 11, § 8. Promissory notes made abroad may be negotiated in Great Britain if duly stamped (48 Geo. III. c. 149, § 21). [Bill of Exchange. Indorsement. Protest, &c.]

PROOF IN BANKRUPTCY is the technical expression applied in England to the sanction of a claimed dividend. Creditors may prove their debts at the meetings appointed by the commissioners after adjudication, and at other meetings appointed for the purpose. Creditors may make affidavit on their own oath, and corporations on that of their agents. By the late act (5 & 6 Vict. c. 122), affidavits are to be made in England before the Court of Review, or either Subdivision Court, or a Commissioner, or the Master or a Registrar or Deputy Registrar of the Bankruptcy Court, or a Master in Chancery; in Scotland or Ireland, before a magistrate; and abroad, before a magistrate (a notary attesting) or before a British minister or consul (§ 67). Besides the affidavit, the commissioners are empowered "to require such further proof, and to examine such other persons in relation thereto, as they shall think fit" (6 Geo. IV. § 46). There are minute provisions in the 1 & 2 Wm. IV. c. 30, for the judicial settlement of disputed claims.

The petitioning creditor must prove like the others; his deposition at the opening not entitling him either to vote or draw a dividend. Where the assignees, or two or more creditors who have proved to the extent of £20, conceive a debt improperly proved, they may make representation to the commissioners, who, on examination of the creditor and witnesses,—or of witnesses alone, if the creditor, when duly summoned, do not appear,—may expunge the proof (6 Geo. IV. § 60). The jurisdiction of the commissioners is both legal and equitable, and "they may inquire into the consideration of a debt notwithstanding a verdict, and if there are equitable grounds on which the verdict is impeachable, they may reject the proof. It may also be inferred, from an observation of Lord Eldon, that the commissioners may inquire into the consideration even though there be a judgment. So it has been determined that the commissioners may inquire into the consideration of a debt notwithstanding an award."—(*Henley*, 101).

No debt can be proved which rests on an illegal consideration; and a claim cut off by limitation before the fiat is of course incapable of being proved. An unliquid debt cannot be proved; as, for instance, a claim of damage not judicially sanctioned. A debt contracted after the fiat cannot be proved; and a special clause was requisite to make debts contracted *bona fide* after the Act of Bankruptcy, and in ignorance of the circumstances, proveable (6 Geo. IV. § 47). Some debts are privileged, and the creditor is entitled to prove and draw the full amount if there be sufficient funds. These are, the wages of servants and clerks, for the period of six months (§ 48), compensation to apprentices for apprentice fees, their apprenticeship being discharged by the bankruptcy (§ 49). By 4 & 5 Wm. IV. c. 40, § 12, where an office-bearer having property of a friendly society in his possession becomes bankrupt, the assignees are bound to deliver over such property within forty days after an authorized demand.

Among the ordinary debts which may be proved, there are to be specially noticed:—

1st, Creditors for future debts, "whether upon any bill, bond, note, or other negotiable security or not," who must deduct interest at 5 per cent. from the declaration of a dividend to the assigned period of payment (6 Geo. IV. § 51).

2d, Sureties. A surety who has paid is entitled to be put in the place of the original debtor, even though he incurred the security after an act of bankruptcy was committed, if he was not aware of the act (§ 52).

3d, An annuity creditor is entitled to prove to the value of the annuity, "regard being had to the original price given for the said annuity, deducting therefrom such diminution in the value thereof as shall have been caused by the lapse of time since the grant thereof to the date of the commission" or fiat (§ 54). An annuitant is not entitled to procure a collateral surety for the payment till he have proved. If the surety pay the amount proved, he is discharged of further liability; and if he do not pay it before any periodical payment of the annuity become due, subsequent to the bankruptcy, he may be sued for arrears, until he have paid the amount proved, with interest at 4 per cent. from the time of notice of proof. On having made payment, the surety comes in the annuitant's place, as a claimant on the estate; and if the annuitant receive any dividends, he must credit them to the surety (§ 55).

4th, Contingent creditors may have their debts valued by the commissioners; and if the contingent event do not intervene so as to enable them to prove for the full amount, they may prove for such value (§ 56).

5th, The obligee in any bottomry or respondentia bond, is admitted to claim, and after loss or contingency to draw a dividend, as if the loss or contingency had happened before the fiat; and "the person effecting a policy may prove on the underwriters' estate, though not interested in the policy, if the person really interested be abroad (§ 53).

6th, The holder of a promissory note on which interest is not reserved, over-due at the date of the fiat, is entitled to prove for interest to the date of the fiat, at the rate allowed by the Queen's Bench in actions on such bills (§ 57). In other cases, interest is not allowed unless it arise out of the custom of trade, and be thus a matter of presumed contract between the parties.

7th, Costs of litigations; as to which Lord Henley observes,—"1. That in any action, whether upon contract or in tort, if a verdict be not obtained till after bankruptcy, the costs which result from the verdict and judgment are not proveable under the commission. 2. That in tort there is no debt whatever with which the costs can be incorporated until the judgment; and that therefore, if the bankruptcy occur after verdict and before judgment, proof cannot be made for the costs" (p. 136).

A creditor holding a security over the bankrupt's estate, must deduct its value from his debt before he can prove. An execution served and levied by seizure of the bankrupt's property, is of this description. A person who has a real security over property by mortgage, pledge, or lien, cannot be compelled to part with it till his debt (with contingent claims of interest, &c.) is paid.

In § 50 of the 6 Geo. IV. there are provisions for adjustment in cases of set-off, or compensation of debts and credits between the bankrupt and his creditors.

(*Statutes as quoted. Henley's Bankrupt Law*, 100-117. *Smith's Mercantile L.* 516-547.) [BANKRUPTCY.]

In IRELAND, the law as to the proof of debts is contained in the act 6 & 7 Wm. IV. c. 14, § 56 to 71, and corresponds with the practice in England, except that, by § 57, the Lord Chancellor may issue an extraordinary commission for proof of debts, with the same powers as the Commissioner of Bankruptcy for Ireland, before whom proofs in Ireland proceed. The method of litigating proofs differs with the different construction of the court. [BANKRUPTCY, COURT OF.]

In SCOTLAND, the proof of debts in bankruptcy is chiefly regulated by the act 2 & 3 Vict. c. 41. [SEQUESTRATION.]

PROPERTY AND INCOME TAX. The first income tax in Britain was imposed in 1798, in order to furnish means for prosecuting the war begun in 1793. It exempted incomes less than £60 a-year; those from £60 to £65 were assessed at the $\frac{1}{120}$th part; those from 65 to 70 at $\frac{1}{95}$th; and the rate progressively increased until the income reached £200 or upwards, when it was taxed at $\frac{1}{10}$th, or 10 per cent., the maximum; a variety of abatements being at same time granted on account of children and other burdens. The commissioners of management, chosen by the parliamentary electors, were assisted, or rather overlooked, by government surveyors. But the regulations, though apparently complex, worked well; and notwithstanding that much evasion was practised, the tax, on the whole, was collected with less difficulty and greater fairness than could have been anticipated. It began April 5, 1798, and ended April 5, 1802, after the peace of Amiens; having produced on an average about £5,500,000 annually.

In 1803, the income tax was revived under the name of property tax. As before, it began on incomes of £60; and gradually increased until the income reached £150, when it was taxed at 5 per cent., the maximum. This rate continued from April 5, 1803, to April 5, 1805, when it was raised to 6¼ per cent. On April 5, 1806, it was increased to 10 per cent. on all incomes, however small, arising from land or capital; professional incomes under £50 were exempted; and incomes of that description exceeding £50 and under £150, when they became subject to the full assessment of 10 per cent., were allowed abatements ranging inversely as their magnitude. This tax ceased April 5, 1816. The following is the return of the value of the several species of property on which the assessment was made, and the gross and net amount of the tax, for the year ended April 5, 1815:—

Schedules		Annual Value of Property.	Gross Assessment.	Net Assessment.
A	Lands, tenements, hereditaments, or heritages...	£60,138,330	£5,923,486	£5,923,189
B	Houses, lands, and tenements..................	38,396,144	2,734,451	2.176,228
C	Funded and stock properties (value estimated)...	30,000,000	2,885,505	2,885,505
D	Profits and gains of trade........................	38,310,935	3,831,088	3,146,332
E	Salaries, pensions, &c............................	11,744,557	1,174,456	1,167,678
	Totals .	£178,589,966	£16,548,986	£15,298,932

In 1842, a combination of circumstances, of too recent occurrence to require explanation, led to the proposal of an income tax by Sir Robert Peel, and its imposition at the rate of 7d. per £1, or £2, 18s. 4d. per cent., on all incomes in Britain amounting to £150 or upwards; an assessment which Sir Robert estimates will produce £3,700,000. The tax, according to the act, is to extend from April 5, 1842, to April 6, 1845; and the following is a summary of its principal provisions:—

Abstract of Principal Provisions of the Income Tax Act, 5 & 6 Vict. c. 35.

The Tax is to be levied under five schedules.

Schedule A imposes 7d. per £1 on the annual income or profits from lands, tenements, and hereditaments, "*in respect of the property thereof*," including mines, iron, gas, and water works, canals, railways, docks, tolls, &c. (§ 1.)

Rules for Assessing.—Lands, tenements, and hereditaments to be charged where situate, at the full annual value or rackrent, if let at rackrent within 7 years, or else at the rackrent at which they are worth, unless such rent is not the full consideration. Tithes, teinds, manors, royalties, casual profits, and fines, are subject to special rules (§§ 60, 66).

Mines to be charged on an average of the 5 preceding years; but when decreasing in value, on the profits of the preceding year. The assessment on a company holding them to be made prior to distribution; any member, however, may claim to be charged separately, in order to set off the loss on one concern against the profits of another (§ 60).

Iron, gas, salt, alum, and water works, quarries, canals, railways, and like concerns, to be assessed on profits of preceding year, and to be charged upon the treasurer or manager in one sum. And the proprietors or trustees may either deduct the duty from the interest payable to creditors on such properties, or may pay them in full (§ 60).

Houses under £10 per annum, and all lands and tenements let for less than a year, to be charged upon the owner (§ 60); all other lands and tenements will be charged upon the occupier, who, if a tenant, will deduct the duty from the rent.

Where lands, &c. are subject to any rent-charge, annuity, or other annual payment, the landlord or owner may deduct the duty out of such payment.

Exemptions.—Buildings of university colleges (not occupied by members), hospitals, public schools, alms-houses, literary or scientific institutions; also rents belonging to hospitals, public schools, and alms-houses (§§ 61, 62).

Schedule B imposes 3½d. per £1 in England, and 2½d. per £1 in Scotland, upon the *occupiers* of real property (§ 1).

Rules for Assessing.—Houses used for trade, and those not used as farm-houses; also manors, royalties, mines, quarries, iron and gas works, canals, fishings, tolls, railways, and similar concerns, are exempt from this schedule (§ 63).

Profits from nurseries or produce-gardens and hop-grounds, if not exceeding 1-10th of a single farm, to be estimated, as under schedule D, at 7d. per £1 (§ 63).

Where exemption is claimed owing to income being less than £150, the profits arising from land to be reckoned at half the rent or annual value in England, and five-fourteenths in Scotland (§ 167); whence tenants in England paying rent under £300, and in Scotland under £420, will be exempt, unless liable otherwise.

Schedule C imposes 7d. per £1 upon all property arising out of any public revenue, without deduction (§ 1).

Rules for Assessing.—The tax to be levied upon all government annuities or dividends payable in Britain; or in Ireland, if for the benefit of any person *not* resident there (§ 88); and to be paid by the persons and corporations intrusted therewith, except where the half-yearly dividends are under 50s.; these last are to be assessed as profits of an *uncertain value* under schedule D (§ 95).

Exemptions.—Stock belonging to friendly societies established under any act, savings banks, charitable institutions, or fund applicable to charitable purposes only, or to the repair of places of worship and colleges (§§ 88, 149).

Schedule D imposes 7d. per £1 upon the annual profits arising from any kind of property, business, or employment, situated or exercised in Britain, and not included in the other schedules; and also upon persons resident there, deriving incomes from other places (§§ 1, 100).

Rules for Assessing.—Trading and manufacturing profits to be computed on an average of the three years preceding, or such shorter period as it has been carried on; and no deductions allowed for improvements or repairs of premises, utensils, or machinery, beyond the average expenditure thereon in the three years preceding, nor for any loss not connected with such trade, nor for capital withdrawn, nor on account of interest which might have been made, nor for any debts, except debts proved to be bad before the commissioners, nor for any sum recoverable under an insurance (§ 100).

No deduction allowed for any annual interest, annuity, or other annual payment out of profits or gains; but the duty corresponding thereto is to be allowed by the person to whom the interest or annuity is payable, on a certificate granted by the commissioners (§§ 100, 102, 104).

No deductions allowed for any disbursements or expenses of maintenance of the parties; nor for rent of dwelling-houses or domestic offices, except such parts as are used for the purpose of business, not exceeding 2-3ds of the rent (§ 100).

Where a business is carried on by a company, the duty is to be assessed upon the firm in one sum; and unless any partner requires to be assessed separately, for the purpose of claiming some exemption, the return is to be made by the precedent acting partner; but if no partner reside in Britain, then by his or their agent: any partner in a concern which has been already so returned, may return his own name and residence, and that he is such a partner, without stating his proportion of the profits, unless the commissioners require it (§ 100).

The profits of trade are to be computed exclusive of those arising from lands and tenements; therefore the annual value of any premises used for the purpose of trade ought to be deducted, although such premises may be the property of the occupier, as he will be assessed for such premises under schedule A (§ 100).

The tax on professions or employments to be computed on the profits of the preceding year only (§ 100). And the above rules as to deductions, &c. extend to them so far as applicable.

Under the head of "profits of an uncertain annual value" are charged the profits on small government dividends (see above, sch. C), and on all discounts and interest, not being annual interest; the duty to be computed on the full amount within the preceding year (§ 100).

This schedule also includes income arising from Irish, colonial, and foreign securities or possessions; the duty to be charged on the former on the full amount which has or will be received in Britain in the current year; on the latter on the average receipts of the three preceding years (§ 100).

All yearly interest, whether personal or charged upon property, is liable under this schedule;

but no assessment shall be made when such interest is payable out of income already brought into charge; the party assessed on such income deducting in this case the duty from the interest when he pays it to the creditor, and who is bound to allow such deduction (§ 102).

The profits of British trades, &c. are to be assessed where they are situate (§ 106); but profits arising in foreign countries or the colonies are to be assessed by the commissioner for London, Bristol, Liverpool, or Glasgow, at or nearest to where the property or remittances have been sent (§ 108).

Statements and returns may be delivered, sealed up, if superscribed with the name and residence of the party, to the assessor of the parish, or at the commissioners' offices, where they shall have given notice that such office is open for the same (§§ 49, 110).

Persons may compound for the duty payable under this schedule for 3 years at an increase of 5 per cent. on the first assessment (§§ 143, 145).

Merchants, though not allowed to deduct loss unconnected with trade, may yet set off the loss in one business against the profits of another (§ 101); hence, if a person is a partner in two firms, one profitable the other not, he should claim to be assessed separately from the other partners (§ 100).

N. B.—Such set-offs are confined to occupations falling under the same schedule.

The tax will be levied by the collector in the ordinary way, unless parties desire to pay it *anonymously*, before the usual period; in which case a certificate of the assessment, marked with a number or letter, will be given to the party, and a counterpart, without his name, sent to the receiver.

If paid in advance, 4 per cent. per annum of discount allowed (§§ 137, 140).

Persons objecting may appeal to the Special Commissioners instead of the Commissioners for General Purposes; or they may have the matter of their assessment altogether taken before the Special Commissioners, making such request to the parish assessor: this, however, is incompetent on the claim of exemption founded on not having £150 a-year (§§ 130, 131).

SCHEDULE E imposes 7d. per £1 upon all salaries, pensions, fees, &c. derived from every public office or employment (§§ 1, 146).

Rules for Assessment.—Perquisites and fees to be taken on the average of three years, or on the preceding year only (§ 146).

Exemptions allowed as in preceding schedules; but no abatement allowed for loss in any business in which the official person may be engaged.

INCOMES UNDER £150.

Although the intent of the act is not to charge the duty on such incomes, yet it imposes the duty in the first instance on all derived from rents or land, or from annuities and interest (except government half-yearly dividends under 50s.), payable through other parties; but any person, on proving to the Commissioners for General Purposes that his aggregate income is under £150, will be exempted from the duties, and be repaid the amount of all deductions or payments made on account thereof.

MANAGEMENT.

"Commissioners for General Purposes," elected commonly by the Land-tax Commissioners from their own number, are to execute all matters with respect to all the schedules, except those which are to be performed by "Additional Commissioners" (chosen by lot from themselves), who are to consider the statements of gains and profits; and by "Special Commissioners" appointed by the Treasury for acting in certain cases under schedule D, and in other matters. The duties are to be raised under the Commissioners of Stamps and Taxes, under the regulations of the acts relating to the assessed taxes.

PROTECTION, PERSONAL. [PERSONAL PROTECTION.]

PROTEST, in the law of bills of exchange and promissory notes, is a notarial instrument, bearing that a bill or note, having been formally presented to the drawee or maker by a notary-public, was dishonoured (by non-payment or non-acceptance, as the case may be), and that the holder protests for recourse (including exchange and re-exchange in foreign bills) against the drawers and indorsers. The laws of the three kingdoms differ so considerably on this subject, that it may be convenient to view them separately.

IN ENGLAND, contrary to the usual practice of the rest of Europe, a protest is not necessary for enforcing recourse on a bill at common law. To enforce payment of foreign bills, however, it became necessary to conform with the rules of the countries where they were drawn, and the necessity of protesting all foreign bills, both for non-acceptance and non-payment, came into observance.

1*st*, *Foreign Bills*.—According to established practice, the protest should be made by a notary-public; but if none can be procured, it is said that the protest may be made by an inhabitant, in presence of two witnesses (*Bayley*, 259). If the person who has drawn the bill abroad come to England, it is not necessary to exhibit a protest to him unless he apply for it. The rules regulating the necessity of protest are the same as those which apply to notice [NOTICE]; and so it is not strictly necessary (though it will seldom fail to be prudent) where there are no effects. When acceptance is refused to a bill coming within the definition of those for which a protest is necessary, it should be put into the hands of a notary, who should again present it, and, on a second refusal, he may note the bill, or mark on it his initials, the year and day of the month, and any reason which may be assigned for non-acceptance, together with his charge. The noting has in itself no effect, except as the first step in the protest, which, as an instrument, the notary need not draw out on the spot, but may prepare at his leisure. A similar practice is adopted on refusal to pay. The notary's presentment will be at the place where the bill is drawn or accepted payable, and if at a banker's, during the usual hours of business. By 2 & 3 Wm. IV. c. 98, when the bill is drawn payable at any place other than what it mentions as the residence of the drawee, and is unaccepted, it may be protested for non-payment at the place where it was drawn payable, without requiring to be a second time presented to the drawee. "In practice in this country," says Mr Chitty, "the holder of bills or notes, whether foreign or inland, himself or by his agent, presents the same for payment on the day they fall due, between nine in the morning and five in the evening, and if not paid, he then sends all his *foreign* bills to a regular notary-public, who sends one or more of his clerks round with such bills in the evening to the respective drawees' residences, and then produces the bills, and again requires payment, and of the charges for noting; and if not paid, he reports to his principal the terms of refusal; and the principal notary afterwards, at his leisure, or as soon as required, draws up his formal protest" (*Chit. on Bills*, 9th Ed. p. 458). In a former edition, Mr Chitty had laid it down as the doctrine of lawyers, that the demand should be made by the notary-public in person. In reference to this opinion, a correspondence ensued between him and the secretaries of the Society of London Notaries and the Association of Liverpool Notaries, in which it was urged by these bodies that the system as above stated was fixed by a long course of practice. The question has not been the subject of judicial decision, and it may be observed that the practice is in opposition to that of other countries (*Traités de Pothier*, II. 149). A protest must bear date on the day of payment.

2*d*, *Inland Bills*.—In these, protest is solely the creature of statute. By 9 & 10 Wm. III. c. 17, and 3 & 4 Anne, c. 9, § 4, inland bills in England for £5 and upwards, expressing themselves to be "for value received," and drawn payable a certain number of days, weeks, or months after date, may be protested for non-acceptance; and if accepted in writing, may be protested for non-payment on the day after the last day of grace. The protest, it is enacted, must be sent, or notice given of it, to the party from whom the bill is received, "who is, upon producing such protest, to repay the said bill or bills, together with all interest and charges, from the day such bill or bills were protested" (9 & 10 Wm. III. c. 17, § 2). The object of these enactments was to give prompt recourse for interest and charges. But "the act only gives an *additional* remedy, and does not take away the common-law one, and therefore it is not necessary to protest,—it being, in all cases of *inland* bills, sufficient to give notice of non-payment, and the holder is entitled to claim interest from the drawer, although there is no protest. In practice, a protest of an inland bill is seldom made, but it is only *noted* for non-payment, and which *noting* is of no utility. . . And a protest made in this country cannot be proven by the mere production of it, as when made and used abroad; but the notary himself must be called to prove the making it" (*Chitty*, 465-466). It is held in interpretation of § 6 of 3 & 4 Anne, c. 10, that protest is not required in bills under £20, to secure the remedy of the statute.

Bayley, 258-267. *Chitty*, 332-343, 445-446.

In Ireland, by the statute consolidating the law on bills of exchange (9 Geo. IV. c. 24), it is lawful for the holder of a bill or note for £5 or upwards, to protest it in the usual manner for non-acceptance or non-payment; "which protest, so made as aforesaid, shall be sent, or otherwise due notice of such dishonour shall be given, by or on behalf of the party holding or protesting such bill or note, to the party from whom such bill or note was received, and whom it is sought to make chargeable therewith, and such party shall thereupon pay the said bill or note, together with all interest and charges from the day when such bill or note was protested . . . ; and in case such protest shall be made and sent, or such due notice of the dishonour of such bill or note shall be given as aforesaid, to any person liable to the payment thereof by reason of such dishonour, the person so receiving such protest or notice, and failing or neglecting to pay the amount of such bill or note so protested or dishonoured, together with the costs of such protest, shall be liable to all costs, damages, and interest, which may and shall accrue thereby" (§ 4). The application of this statute, it will be observed, is not limited to bills for value, or payable within a fixed period after date; and the period of sending the protest is not fixed to within fourteen days. On the narrative that it is the practice for bankers and others to attend till the hour of six in the afternoon, for the purpose of receiving payment of bills presented at an earlier hour, and which have not been paid, after which hour they have been sent to a notary-public to be again presented and protested if not paid; "and whereas doubts have existed, whether the acceptors of bills of exchange, &c. have not, by law, till the last instant of the day on which the same respectively may become due to pay the same; and by reason of such doubts, notaries-public in *Ireland* have been required, at late and unseasonable hours of the night, to receive payment, &c.;" it is enacted,—that when a notary presents a bill, and it is not paid by 9 o'clock P.M., it shall be dishonoured, and may be protested (§ 12). Notaries are to register bills delivered to them for presentment. All notarial charges (which are fixed by the act) fall on the party liable to pay the bill; and he is liable for the expense of notarial presentment, though the bill be honoured on such presentment, if it have not been so on the presentment of the party. The notary may demand the charges from the person liable, and, in case of refusal, may refuse to receive acceptance, or payment of the principal sum, as the case may be, and hold the bill dishonoured (§ 13).

IN SCOTLAND, protest for non-acceptance and non-payment is, both in the case of inland and foreign bills, an essential part of due negotiation, and necessary to found recourse against drawers and indorsers. Besides being essential to a claim of recourse, it is necessary for recovery even against the original party bound as maker or acceptor, where recourse is sought through the peculiar facilities for enforcing payment of bills of exchange in Scotland, by summary diligence. [DILIGENCE.] The protest is taken by a notary-public, in presence of two witnesses. It cannot be supplied by any description of evidence as to the knowledge of the party that recourse was to be claimed against him, or even by a reference to his own oath to that effect. It appears to be held as law in Scotland, that the presentment for protest must be by the notary himself, and not by his clerk. In practice, the bill is noted on the day of presentment for acceptance, or the day of payment (being the last day of grace, where days of grace are allowed), and the instrument of protest is drawn up afterwards. To render summary diligence competent, the protest must be recorded within six months—if for non-acceptance, from the date of the bill—if for non-payment, from the time for payment. (*Thomson on Bills*, 442-456.)

PRUNES, OR DRIED PLUMS, are brought from the south of France, particularly Tours; they are oblong and rather sweet. The best are the *Pruneaux de St Julien*. Prunelloes, a kind of a reddish-yellow colour, brought from Provence, have a sweet, grateful taste, with a slight and pleasant acidity. The importations are subject to considerable fluctuations.

PRUSSIA, a powerful European kingdom, occupying a great part of the N. of Germany and the N. portion of what was formerly Poland, extends from 49° 8′ to 55° 50′ N. lat., and from 6° to 22° 50′ E. long. Provinces—1. Prussia Proper; 2. Pomerania; 3. Posen; 4. Silesia; 5. Brandenburg; 6. Prussian Saxony; 7. Westphalia; and 8. Rhine. Area, 106,500 sq. miles. Population in 1840, 14,907,091. Capital, Berlin, an inland city; pop. 265,394. Government, an hereditary monarchy, with a council of state, and, since 1823, provincial assemblies, to whom laws are submitted for deliberation; but the royal prerogative is more substantially modified by the power resulting from the intelligence and military organization of the people.

The six provinces first mentioned, bounded N. E. and S. by Mecklenburg, the Baltic, Russia, Poland, Austria, and Saxony, are separated on the W. by Hanover, Hesse-Cassel, and other small German states, from the provinces of Westphalia and Rhine, which again are bounded on the W. and S. by the Netherlands, Belgium and France, and Bavaria. To these provinces, spread over so wide a surface, no general description will apply; but they mostly present a level aspect,—so much so, that many marshes and lakes have been formed by the inundations of the rivers. The mountain-tracts of the Hartz in Saxony, and the Riesengeberge in Silesia, are chiefly on the frontier. The rivers traversing the country, as the Rhine, Weser, Elbe, Oder, and Vistula, flow generally, with a slow current, from south to north. In the western provinces the climate is warmer than that of England; in the eastern it is cold, and also very moist along the shores of the Baltic. On the whole, the soil is sandy and poor. The most fertile and populous districts are Silesia, Rhenish Prussia, and Saxony, particularly the plain of Magdeburg.

Agriculture, though in a backward state, is improving. The rural products resemble those of Britain; differing chiefly in the more extensive cultivation of rye, which, with potatoes, forms the principal food of the lower classes. Flax and hemp are largely raised; also chicory and beet, which last yields about a fourth part of the sugar consumed. Tobacco, hops, and madder, are likewise cultivated; and in the Rhenish districts wine is made. In 1837, the number of horses in the kingdom was 1,472,901; cattle, 4,838,622; sheep, 15,011,452; goats, 327,525; and hogs, 1,936,304. Of the sheep, 3,617,469 were pure merinos, and 7,165,068 half-bred: these fine kinds are principally in Saxony, Silesia, and Brandenburg, and their wool forms the great staple of the kingdom. The small occupiers of land are usually proprietors; the larger owners generally cultivate their estates through stewards,—there being few farms except on the crown domains.

The kingdom, being generally level, is not rich in minerals; but in the Hartz, Riesengebirge, and other districts, iron, copper, zinc, lead, and coal, are plentiful; and amber is found on the coast.

Prussia is mainly an agricultural country, though the Rhine, Saxony, Silesia, and some other parts, are now distinguished for several branches of manufactures. The latter are chiefly in the Rhine province, on the Wupper, in and around Elberfield and Solingen, which abounds in coal and water-power, and where cottons, silks, and linens are largely produced. Linens are also made for exportation in and around Hirchberg in Silesia, in Westphalia, and in Erneland in Ducal Prussia. Superior broadcloth is made at Upen, Malmedy, Berlin, and Aix-la-Chapelle; and both linens and woollens for domestic use are woven in almost every cottage. Hardware and cutlery are largely made at Hagen, Iserlohn, Solingen, Olpe, and Essen; and Berlin is celebrated for its cast-iron articles. Beer is extensively brewed in all parts; and the consumption of spirits is estimated at nearly 45,000,000 Imp. gallons a-year! Berlin and Halle are the chief seats of the book-trade.

The internal trade of Prussia is facilitated by numerous rivers, almost every where navigable, and so connected by canals, that goods may be transmitted even between Hamburg and Dantzic. Excellent carriage-roads also abound, with mail-coaches on the principal lines; and railways have been formed from Berlin to Potsdam and to Stettin, between Cologne and Aix-la-Chapelle, and in other places.

The external commerce of the kingdom is likewise considerable, and rapidly increasing; though, since the establishment of the Customs Union, its amount cannot be ascertained. It extends to almost all parts of Europe, and to America; but the chief intercourse is with the other German states, Britain, Russia, Sweden, Denmark, and the Netherlands. The British trade (except the shipment of grain and timber from the Baltic ports) is mostly carried on at second hand through Hamburg, Bremen, and the Netherlands ports, especially Rotterdam. The imports embrace sugar, coffee, cotton wool, twist and stuffs, and English manufactures of various kinds; dyeing substances, spices, wines, salt (a government monopoly), and coals. The exports consist principally of raw produce, mostly corn, wool, timber, zinc, flax, hams and salted provisions, and bristles; the manufactured exports are chiefly linens, woollens, hardware, jewellery, watches, wooden clocks, Prussian blue, spirits, and beer. [PRUSSO-GERMAN CUSTOMS UNION.]

Timber is now becoming scarce in Prussia; and that shipped is mostly brought to Dantzic and Memel from Russian Poland; from whence likewise the corn exported is principally derived. The shipments of corn are very considerable, especially to Britain, Holland, and Norway, in years of scarcity. In 1838, 1839, and 1840, when the crops were deficient in England, the total shipments of grain from Prussia amounted to 25,103,758 scheffels, or about 4,744,610 Imp. quarters, principally wheat, but including considerable quantities of rye, barley, oats, beans and pease; of which 3,149,551 quarters were sent to Britain (*Par. Paper*, 1842, No. 7, p. 61). The chief corn ports are Dantzic, Stettin, and Konigsberg, especially the first; the exports from Stettin are chiefly the growth of Silesia and the Mark.

The shipping of Prussia is rather small, considering its extent of coast; amounting in 1841 only to 738 vessels, 147,450 tons.

PORTS.—*Dantzic* or *Gdansk*, the principal, a strongly fortified and flourishing city, lies on the left bank of the chief arm of the Vistula, about 3½ miles from the Baltic, in lat. 54° 21′ N., long. 18° 39′ E. Pop. 62,000. The harbour scarcely admits vessels drawing more than 12 feet, but there is good anchorage in the roads for those of any burden. It possesses numerous commercial institutions, shipbuilding yards, and manufactories; but its importance is mainly derived from its being the outlet of the immense territories watered by the Vistula and its tributaries. It is the greatest corn entrepôt of the world; and its exports besides embrace pine battens, deals and beams, oak staves, ashes, bones, wool, zinc, spruce beer, and feathers; most of which articles are, as is usual in the Baltic ports, arranged into three qualities by the *braack*, a body of government inspectors. In 1840, the exports amounted to £1,798,722, and the imports to £390,280. About 210,000 tons of shipping entered in 1840.

Stettin, a fortified seaport town of Pomerania, situated on the Oder, 36 miles from its mouth, in lat. 53° 24′ N., long. 14° 33′ E. Pop. 32,000. Vessels drawing more than 7 or 8 feet load and unload by means of lighters at Swinemunde, the out-port, where there is from 19 to 21 feet. It is the chief seat of the Prussian import-trade; and, being the emporium of the countries watered by the Oder and its tributaries, is the port of Berlin, Breslaw, and Frankfort. Exports; linens, corn, wool, timber, zinc, manganese, bones, oil-cake, &c.; the whole amounting in 1840 to £1,105,505; the imports in the same year were valued at £1,328,900. About 170,000 tons of shipping enter annually.

Memel, the most northerly port, lies in lat. 55° 42′ N., long. 21° 8′ E., on the N. E. side of the Kurische-haff, a great salt lagoon. Pop. 9034. The harbour is deep and commodious; but, owing to a bar, vessels are frequently obliged to load and unload in the roads, where the anchorage is not good. Shipbuilding is prosecuted extensively; and the staple export is timber, chiefly fir; the annual average amount being about 80,000 loads, besides nearly 600,000 planks. Other exports, corn, flax, hemp, wool, linseed, hides, bones, and bristles. About 100,000 lasts of shipping enter annually.

Konigsberg, the capital of East Prussia, lies partly on an island, but chiefly on the N. bank of the Pregel, near its junction with the Frische-haff, in lat. 54° 42′ N., long. 20° 30′ E. Pop. 68,000. In 1839, the value of the exports, chiefly corn, linseed, rapeseed, bristles, flax, and hemp, amounted to £806,897; and the imports to £486,170. About 70,000 tons of shipping enter annually.

Pillau, Elbing, Koslin, Stralsund, Griefswald, Wolgast, and Barth, are the only others worthy of notice. The water at these ports is shallow, seldom exceeding 10 or 12 feet.

MEASURES, MONEY, FINANCES, &c.

Measures and Weights.—The Prussian or Rhineland foot of 12 inches = 12·356 Imp. inches; the ell of 25½ Prussian inches = 26·26 Imp. inches, and 100 ells = 72·94 Imp. yards; the fathom is 6, and the ruthe or perch 12 feet. The mile of 2000 perches = 8237 Imp. yards.

The morgen or acre of 180 sq. perches = 3054 Imp. sq. yards, or 2 Imp. roods 21 poles nearly; and the hufe is 30 morgen.

The ohm, liquid measure, of 2 eimers, 4 ankers, or 120 quarts = 30·23 Imp. gallons; the oxhoft is 3 eimers; and the tun, beer measure, is 100 quarts, or 25·19 Imp. gallons.

The scheffel, corn measure, of 16 metzen, or 48 quarts, = 1·512 Imp. bushel, or 5¼ scheffels = 1 Imp. quarter nearly; and 100 scheffels = 18·89 Imp. quarters; 60 scheffels = 1 last.

The pound of (2 Cologne marks) 32 loths, or 128 quintins, = 7217½ troy grains; and 100 Prussian lbs. = 103·11 lbs. avoirdupois: the centner or quintal is 110 Prussian lbs. = 113·42, or about 113½ lbs. avoirdupois: and the ship-last = 4000 Prussian lbs. The apothecaries' pound is ⅔ds of the commercial pound.

Gold and silver are weighed by the Cologne mark, reckoned equal 3608¼ troy grains; and their fineness is expressed in the manner explained under the head GERMANY. The prices of both metals are usually stated in Prussian dollars per mark fine.

The following old measures are still partially in use:—

Berlin.—The ell = 26·25 Imp. inches; the ohm of 2 eimers, 4 ankers, or 128 quarts, = 32·97 Imp. gallons; the last of wheat of 3 wispels, or 72 scheffels, = 103·54 Imp. bushels; and the last of oats of 2 wispels = 69·02 Imp. bushels; the centner of 110 lbs. = 113·63 lbs. avoirdupois.

Dantzic.—The ell of 2 feet = 22·6 Imp. inches; the ohm of 2 eimers, or 128 quarts, = 32·97 Imp. gallons; the last of 3¾ malters, 60 scheffels, or 240 viertels, = 90·24 Imp. bushels. A last of timber is 80 cubic feet; and a last of pipe staves is 4 schocks or 240.

Konigsberg.—100 old Prussian ells = 63 Imp. yards nearly. The stof = 0·315 Imp. gallon. The last of 60 old or 56½ new Prussian scheffels = 85·43 Imp. bushels.

Money.—Accounts are now stated in thalers or dollars of 30 silver groschen, each of 12 pfennings, Prussian currency. The Prussian dollar, being estimated at the rate of 14 to the Cologne mark of fine silver, is equal 2s. 10¾d. sterling; and 6 dollars, 27 silver groschen, equal £1.

The Prussian dollar was formerly divided into 24 good groschen. The Dantzic florin of 30 groschen = 9d. sterling: and the florin in Prussian currency = 1s. sterling.

The coins are,—In gold; double, single, and half Fredericks, of the nominal value of 10, 5, and 2½ dollars, but bearing generally an agio of 15 per cent. above currency; these are minted at the rate of 35 to the Cologne mark 65-72ds fine: In silver; dollars minted at the rate of 10½ to the Cologne mark, ¾ths fine; also ⅓, ⅙, and $\frac{1}{12}$ dollars, and base pieces for 1 and for ½ groschen; In copper; 4, 3, 2, and 1 pfenning pieces.

The usance of bills on Berlin, Dantzic, &c., is 14 days' sight; days of grace 3.

The Prussian state bank issues paper money, which circulates on a par with silver: it has offices at Berlin, Konigsberg, Elbing, Dantzic, Stettin, Frankfort-on-the-Oder, Breslaw, Magdeburg, Munster, and Cologne.

Finances.—Net revenue in 1841, 55,867,000 thalers, of which th. 47,280,000 from imposts, including bridge, road, and canal dues, &c., and th. 4,020,000 from domains and forests. The expenditure was about the same, including th. 23,721,000 for the army, and th. 8,574,000 for annual charge on the public debt; the net amount of which, after deducting the sinking fund, was estimated, in 1841, at th. 130,000,000, or about £19,000,000.

Prussia contracted loans in England in 1818, 1822, and 1830; the last being the only one still unpaid. It was to the amount of £3,800,400, in bonds for £100 each, bearing 4 per cent. interest, and payable in London. They are furnished with coupons, and are transferable without registration. A portion is cancelled by the sinking fund.

The remainder of the debt is held by persons on the Continent, where the credit of the Prussian government stands very high.

A *Convention* with Great Britain, April 2, 1824, provides for the reciprocal abrogation of all discriminating and countervailing duties, levied upon the ships or productions of either nation in the ports of the other. It is to endure for 10 years, and further until the end of 12 months after notice. And by a Royal Ordinance, May 20, 1826, the commerce and navigation of Great Britain is placed in Prussian ports upon the footing of "the most favoured nations."

PRUSSIAN BLUE, the ferrosesquicyanuret of iron of chemists, a pigment or dye, composed of cyanogen and iron, and procured by a chemical process from carbonate of potassa, bullock's blood, green vitriol, and alum. It is prepared of different degrees of purity, and additions are made to it according to the purposes for which it is required. When pure, it is of a rich and intense blue, with a copper tint upon its surface; inodorous, tasteless; insoluble in water, in alcohol, and in dilute acids; but is acted upon and dissolved by strong acids. It is extremely hygrometric, for, after having been well dried, it speedily attracts moisture.

PRUSSIC ACID, or hydrocyanic acid, is obtained by the action of muriatic acid on bicyanuret of mercury. It is limpid, very volatile, and of a strong pungent odour, resembling that of bitter almonds. Its taste is acrid, and it is virulently poisonous. Sp. gr. ·706. In medicine it is used as a sedative.

PRUSSO-GERMAN CUSTOMS UNION OR ZOLLVEREIN. This association for assimilating, uniting, and simplifying the fiscal arrangements of the numerous states of Germany, though it naturally arose out of the advancing civilisation of that country, derived its immediate origin partly from the circumstances resulting from the last European war. For a series of years prior to 1814, the "Continental System" of Napoleon, and other hostile obstructions, by nearly excluding British merchandise, had the effect of creating and extending manufactures in various parts of Germany. None of the tariffs of the different states being then prohibitory, except that of Austria, the young manufactures became exposed on the return of peace to the crushing competition of England, and great distress was produced, particularly in the Rhenish provinces, which had at the same time the vast markets of France withdrawn from them by their transfer from that power to Prussia. Influenced partly by the discontent of these provinces, and partly by the exclusion of all her leading staples, except wool, from the markets of Great Britain, Prussia, in 1818, issued a new tariff, which raised the duties on the imports into her dominions. This new tariff, however, though amply protective to her own subjects, aggravated the difficulties of the manufacturers of the smaller German states, whose products it excluded, and who also, shut out from France and Austria, and having their internal trade impeded by numerous and conflicting customs and transit regulations, were now each nearly confined to the narrow limits of their respective domestic markets. The distressed manufacturers naturally sought a remedy for these evils; and in 1819 an association was formed at Nuremberg, which, gradually numbering 6000 members, ultimately forced the subject upon the attention of the German governments. Many negotiations took place; at length, in 1827, a Customs Union was formed between Wurtemberg and Bavaria; next followed the treaty between Prussia and Hesse in 1828; and about the same time a third union, the *Mittel Verein*, took place between Saxony, Hanover, and some minor states. The former two were soon united by the exertions of Prussia; through whose influence likewise several states were detached from the Mittel Verein, which was afterwards dissolved. And in 1833, nearly the whole of the members of these unions were associated into one great league, the *Zollverein*, which came into operation January 1, 1834; and being afterwards joined—in 1835 by Nassau and Baden; in 1836, by Frankfort; in 1841, by Brunswick and Lippe-Schaumberg; and in 1842, by Luxemburg,—now comprises almost the whole of Germany, except the parts subject to Austria, Hanover, Oldenburg, Mecklenburg, Holstein, and the Hanse Towns.

By the convention of the Zollverein all restrictions to communication and transit are removed, internal custom-houses abolished, and a common system and collection of export, import, and transit duties established, to be levied at the exterior boundaries of the frontier states, and divided among the members of the league according to their population: a common system of monies and weights was also provided for; and it was agreed that there shall be a meeting of plenipotentiaries of the associated governments, in June annually, at which the affairs of the league shall be discussed. The duration of the convention was provisionally fixed for January 1, 1842; but if not then terminated (by two years' previous notice), it shall be considered as prolonged for 12 years, and so on from time to time for a further period of 12 years.

STATEMENT of the Total Population of the Zollverein, and of the Amount of Customs Duties received, with the Average Amount per Individual in Silver Groschen and Pfennings, and the per Centage Cost of Collection, in each Year from 1834 to 1838.

Years.	Population.	Gross Receipts.				Average per Individual.		Cost of Collection.
		On Imports.	On Exports.	On Transit.	Total.			
		Prus. Doll.	Prus. Doll.	Prus. Doll.	Prus. Doll.	Gr.	Pf.	
1834	23,478,120	13,763,458	422,450	529,534	14,715,442	18	8	16 per Cent.
1835	23,752,354	15,731,182	502,494	526,158	16,759,834	21	2	14 ,,
1836	25,719,582	17,332,770	521,375	487,321	18,341,466	21	4	12½ ,,
1837	26,013,717	16,866,187	408,549	592,310	17,867,046	20	6	.. ,,
1838	26,048,970	19,235,823	551,537	534,967	20,322,347	23	4	.. ,,

In the year 1839, the total gross receipts amounted to 20,569,486 Prussian dollars; in 1840, to 21,293,232; and in 1841 (as shown below), to 21,915,944 dollars.

The following Table shows the Area and Population of the several Members of the Zollverein, the Amount of Duty raised, and the Shares of the Net Receipts in the Year 1841.

	Sq. miles.	Population.	Duty Raised.	Share of Net Receipts.
			Prus. Doll.	Prus. Doll.
1. Prussia, and the states which have come to an agreement with her	109,126	15,159,031	14,701,855	10,925,229
2. Bavaria	31,259	4,375,586	1,681,171	3,158,621
3. Saxony	5,749	1,706,276	1,878,176	1,229,727
4. Wurtemberg	8,150	1,703,258	474,448	1,291,234
5. Grand Duchy of Baden	5,915	1,294,131	846,364	936,847
6. Electorate of Hesse	3,853	666,280	408,673	480,193
7. Grand Duchy of Hesse	3,793	820,907	515,444	637,415
8. Thuringian Association	4,940	952,421	348,212	686,418
9. Duchy of Nassau	1,750	398,095	35,141	288,682
	174,535	27,075,985	20,889,484	19,634,366
10. Frankfort-on-the-Maine	92	66,338	1,026,460	1,026,498
	174,627	27,142,323	21,915,944	20,660,864

The progress of the Zollverein was jealously watched in this country, as the tariff adopted by it was more unfavourable to the admission of British goods than the tariffs previously existing in the other states; and our manufacturers feared, with apparent reason, that their trade would suffer in every case where additional duties were imposed. It is impossible to investigate this question minutely, as the trade between Britain and the states of the League passes not only through German ports, but also through Holland and Belgium,—the principal channels being Hamburg and the Elbe, Rotterdam and the Rhine, and Bremen and the Weser. But a general estimate will be obtained by a comparison of our trade with all these places.

DECLARED VALUE of British and Irish Produce and Manufactures exported to Germany, Holland, and Belgium, in the following Years.

	Average of Five Years.		1839.	1840.
	1829-33.	1834-38.		
	£	£	£	£
Hanse Towns	4,358,650	4,665,767	5,215,155	5,408,499
Mecklenburg, Hanover, and Oldenburg	42,364	32,845		
Prussia	192,497	152,035	206,866	219,345
Holland	2,402,546	2,843,550	3,563,792	3,416,190
Belgium		856,150	881,831	880,286
Total	6,996,057	8,550,347	9,867,644	9,924,320
Whereof—				
Cotton Manufactures*	2,130,161	2,152,206	1,901,308	1,905,128
Cotton Twist and yarn	2,318,846	3,349,856	4,098,977	4,099,175
Linen Manufactures	13,942	39,397	58,984	73,308
Linen Yarn	480	51,970	152,677	168,410
Woollen Manufactures	897,972	1,055,291	1,267,489	1,139,631
Woollen Yarn	157,484	255,500	322,886	357,999
Machinery and mill-work	13,984	90,365	170,361	173,013
Hardware and cutlery	112,065	137,790	153,195	157,269
Brass and copper manufactures	58,286	130,355	200,709	209,515
Iron and steel	142,316	287,360	411,247	440,070
Coals	45,105	67,190	123,101	120,679
Refined sugar	482,983	92,303	8,399	5,083
All other articles	622,433	840,764	998,311	1,075,040

The above, while it exhibits a highly satisfactory increase in the amount of our exports, shows also, as already noticed [COMMERCE], that that increase mainly consists of raw products and half-manufactured articles, as coal, iron, steel, twist, and yarn. This is quite in harmony with the tariff of the Zollverein, which admits raw materials, and materials serving the ends of agriculture and manufactures, either without any, or on very low duties. Thus, raw cotton, wool, coal, pig-iron, ores, raw hides and skins, potashes, turpentine, chalk, rags, manure, earths, black-lead, wood, seed, and such like, are exempt from duty; and low rates are imposed on twist and yarn, the produce of our superior machinery; metals in the earlier progress of manipulation; and all articles to which more labour is to be applied. But the duties press heavily, or rather prohibitorily, on articles entering into competition with the manufactures of Germany, which are generally of a coarse heavy kind: this is effected by the imposition of a fixed rate on the *weight* of the goods imported, without any reference to quality or fluctuation of prices; so that it falls lightest on fine goods and heaviest on the common kinds. They are on cotton manufactures, £7, 10s. per cwt.; on woollens, £4, 10s.; on hardwares, £8, 5s.; on common linens, 33s.; on fine linens, £3, 6s.; and on silks, £16, 10s. per cwt. Estimated *ad valorem*, the duty on cottons varies in this way from 3½ to 120 per cent., and on woollens from 20 to 50 per cent.; and these per centages will of course increase according as the articles fall in price. The necessary operation of this system is the exclusion from the markets of almost all the commoner articles of foreign manufacture; in short, all those largely consumed in Germany, for which a complete monopoly has been created in favour of the home producer.

The manufactures of Germany, however, are not to be considered as deriving their existence solely from tariff protection. Many kinds,—as those of linens and woollens,—have been long established; and their cotton manufacture, though of comparatively recent introduction, has in some departments, particularly hosiery [HOSIERY], even outstripped that of Britain. In truth, much of the progress of manufactures in Germany is the natural result of her return to the arts of peace.

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* "The decrease in cotton goods has been chiefly in printed cottons; especially in red printed cotton, or Turkey reds, in which the dyers and printers of Germany and Switzerland excel those of all other countries. It is indeed probable that British printed cottons will very shortly cease to be used in any of the Zollverein states."—(*Macgregor's Commercial Tariffs*, &c., part v. p. 69.)

A monopoly of cheap production, and the exclusive possession of advantages for which civilized man is every where struggling, cannot be always retained by England. Without possessing perhaps the enterprise of the British and Americans, the Germans excel in judgment, calculation, and perseverance; and they have aptitudes and facilities of their own, which greatly aid the development of their industry. Their habits are eminently frugal; and wages are very low, especially in Saxony, where potato cultivation and the cotton manufacture appear to have advanced simultaneously. Elementary instruction is provided for all, and special instruction for those who exhibit any particular genius; and the arts of design, metallurgy, and chemistry, are better understood than with us; while even in those branches in which our superiority is the most marked, such as machine-making, competition is rapidly marching after us. To these influences has now to be added that of the Zollverein, which, by rendering its numerous states commercially one country, with one frontier, establishing in fact perfect free trade among 27,000,000 of people, and leading in every direction to extensions of the means of internal communication, has given a prodigious impulse to every department of industry.

Yet, after allowing for all these circumstances, the immense capital, and other advantages which still render Britain superior to the rest of the world in manufacturing power, would, there can be no doubt, enable it to export much more largely to the states of the Zollverein were their tariff more liberal. Instead of any modification, however, it is feared by many that the protecting system will be extended, so as to exclude the yarns and other half-manufactured articles of which our exports now mainly consist; and it is certain that the tendency of the predominant legislation of Germany is to secure more and more of the home market in every stage of the process of manufacture. But this predominancy, we may remark, is rather owing to the youthful vigour, activity, and concentration of the manufacturing interests than to their importance compared with those of agriculture. The latter, which are much more diffused, more productive, and represent a vastly greater amount of capital and labour than the former, are, and must long continue, intimately connected with the foreign trade of Germany; for it is to distant markets alone they can look for the sale of that surplus produce which home demand does not consume; and their just influence will doubtless be restored when the Zollverein shall, by its consolidation, have become sufficiently powerful to repress the local and partial influences of its various elements, and blend them into the paramount interests of the whole. To this restoration the progress of commercial legislation in this country, as indicated by the late modification of our tariff, will contribute, as well by checking the flow of capital from rural to manufacturing pursuits in the states of the Zollverein, as by inciting the agricultural interests in those states to control any farther extension of the restrictive policy. It is besides only upon a moderate system of duties that contraband trade can be prevented, and a healthy action permanently communicated to the manufacturing interests themselves. We have, therefore, just grounds to believe that the restrictive tendency of the Zollverein will be checked, or at least not suffered materially to increase; and that, while the advancing wealth of Germany will naturally lead to an enlargement of its foreign commerce, an important share of this commerce must continue to be held by Britain, from the great amount, variety, and cheapness of her merchandise.

The members of the Zollverein desire its extension; but, by its fundamental organization, no states can be admitted but those of Germany,—the league being indeed partly the result of a popular feeling among those states for unity and nationalization. Of the different members, Saxony is that which on the whole has profited most by the League, for in that country manufacturing industry being most developed, it had the vantage ground in competing with the others; and new and extensive markets were opened to her, and at the same time closed to a great extent against foreign rivals. Frankfort-on-the-Maine, again, is that which has experienced least benefit from the League. [FRANKFORT.] Prussia, though the leading and most zealous member, is, in a financial point of view, situated less advantageously than she would have been had her independent tariff been continued: many of her protected classes have likewise suffered from the competition of Saxony. This has led to the general belief that the ostensible object of the Zollverein is neither the only nor the chief motive which has influenced that power, but rather political views, extending beyond the interests of the present day, and tending to its own aggrandisement. The origin of the union, however, was, as we have already explained, commercial; and this circumstance strengthens the probability of its duration; but political consequences of the greatest importance cannot fail to arise from the external relations of the Zollverein. Indeed, the distinction between a commercial union and a political alliance is an imaginary one; since, whatever so completely unites the interests of different bodies of people, must combine their policy, their diplomacy, and, in the event of danger, their strength.

Weights, Monies, Conventions, &c.

Weights.—The weight adopted by the League as the basis of their tariff, is the centner or hundredweight of the duchy of Baden, which is divided into 100 pounds, each equal to the livre usuelle, or ½ kilogramme of France. The Zoll-centner of 100 lbs. is therefore equal to 110·243, or very nearly 110¼ avoird. lbs.; and 100 avoird. lbs. = 90·708, or nearly 90¾ Zoll-pounds. Also, 65 Zoll-centners = 64 avoird. hundredweights nearly. The Zoll pound is divided into 30 loths.

The following equations are given in the tariff:—

Zoll-pounds.
935·422 = 1000 Prussian lbs.
1120 = 1000 Bavarian lbs.
2000 = 1000 Kilogrammes.
935·456 = 1000 Wurtemberg lbs.
933·673 = 1000 Saxon (Dresden) lbs.
Or, approximately,
14 = 15 Prussian lbs.
28 = 25 Bavarian lbs.
2 = 1 Kilogramme.
14 = 15 Wurtemberg lbs.
15 = 16 Saxon (Dresden) lbs.
Also,
Zoll-centners.
36 = 35 Prussian centners of 110 lbs.
28 = 25 Bavarian centners of 100 lbs.
2 = 1 quintal of 100 kilogrammes.
36 = 37 Wurtemberg centners of 104 lbs.
36 = 35 Saxon (Dresden) centners of 110 lbs.

Money.—The integer of account in the northern states is the Prussian dollar (*thaler*) or crown of 30 silver groschen; in the southern, the Bavarian guilder or florin of 60 kreutzers. The former is equivalent to 2s. 10¾d., the latter to 1s. 8d. sterling; the Cologne mark of pure silver, of 233·855 grammes, being represented by 14 dollars or 24½ florins. Hence 1 dollar = 1¾ florin; 1 florin = 4/7 dollar; and 15 silver groschen = 52½ kreutzers.

A new coin has been struck, common to all the states, of the value of 1/7th of the mark of pure silver, and equivalent consequently to 2 Prussian dollars, 3½ Bavarian florins, or 5s. 9½d. sterling. It bears the effigy of the King of Prussia, and has on the reverse the inscription of *Vereins Münze*, or "Union's Money."

Treaties of Commerce have been effected with Holland, the Hanse Towns, and Great Britain. The last mentioned, negotiated with Prussia, March 2, 1841, provides that the vessels of the states of the Zollverein, with their cargoes, consisting of goods legally importable into the United Kingdom and colonies, by the said vessels, from the ports of the countries to which they respectively belong, shall, when coming from the mouths of the Meuse or Elbe, or any navigable river lying between these streams, and communicating with any of the said states, be admitted into the ports of the United Kingdom and colonies, in as ample a manner as if the ports from which such vessels may have come were within the dominions of any of the said states; and such vessels shall be permitted to import the said goods upon the same terms on which they might be imported if coming from the national ports of such vessels.

In like manner, such vessels proceeding from the United Kingdom and colonies to the ports and places thus referred to, shall be treated as if returning to a Prussian Baltic port,—it being understood that these privileges are to extend to the vessels of the states aforesaid and their cargoes, only in respect to each of the said ports in which British vessels and their cargoes shall, upon their arrival and departure, continue to be placed upon the same footing as the vessels of the states of the Zollverein.

This treaty, unless terminated January 1, 1848, by 6 months' previous notice, remains in force until January 1, 1854, and further until the end of 12 months after notice by either party.

Further information will be found in Dr Bowring's "Report on the Prussian Commercial Union," 1840, and in Mr Macgregor's "Commercial Tariffs and Regulations of the several States of Europe," &c., part v. July 1842.

PULLICATES, cotton handkerchiefs, checked, of various colours.

PULQUE, a spirituous liquor made in Mexico, from the maguey or agave.

PUMICE STONE (It. *Pietra pomice*) is generally assumed to be a lava or volcanic glass, though it does not occur in all volcanic countries. It is extremely porous, of a fibrous texture, and is harsh to the touch; colour gray, tinged with brown or yellow; it has a shining, pearly lustre, and is very light. Pumice is quarried and exported in large quantities from Lipari and the isles of Ponza. It is used for polishing metals and other purposes in the arts.

PUNCHEON, a measure of capacity for liquids. [Measure, Wine.]

PURPLE WOOD, a tropical cabinet-wood, lately introduced, said to be the produce of a kind of thorn. It is a narrow wood, being only about four inches wide, of a purple colour, and without veins.

PUTCHUCK, the fleshy root of a plant growing in Gujerat. It is largely exported from Bombay and other ports of the N.W. of India to China, where it is used as incense. In its commercial state it is generally mixed with impurities.

PUTTY, a vulgar name for the peroxide of tin, generally used for polishing mirrors and lenses, and for rendering glass white and opaque, converting it into enamel; and for other purposes in the arts. This must not be confounded with the putty of glaziers, which is prepared by kneading chalk with linseed oil.

PYROLIGNEOUS ACID. [Acetic Acid. Vinegar.]

Q.

QUARANTINE Laws, regulating the intercourse with countries subject to pestilence, originated in the 15th century in Venice; and, though also applied to cases of cholera and yellow fever, owe their introduction, as well as their continuance, to dread of the plague of the Levant. They consist of regulations interrupting the intercourse, and subjecting men and animals communicating with the country affected by or suspected of contagion, to a probationary confinement, and goods and letters brought from it (and hence assumed to contain contagious poison) to a process of depuration. The confinement and depuration take place on shipboard, or, as in Malta, Marseilles, and other Mediterranean ports, in isolated establishments called lazarettoes. Goods are subjected to quarantine according as they are *non-susceptible*, a class embracing wood, metals, and fruits; or *susceptible*, including all animal substances, such as wool, silk, and leather, and many vegetable matters, such as cotton, linen, and paper,—the whole of which are opened up, ventilated, and sometimes fumigated. Every ship is furnished by the sanatory authority, at the last port where it touched, with a *bill of health*, which when *clean* generally exempts the passengers and goods from quarantine; but if *suspected* or *foul*, subjects them to it for periods, differing according to circumstances, from about 5 to 40 days; from which last period the term quarantine is derived. The countries upon the Levant are considered as permanently in a state of suspicion; and no ship sailing from any of them is considered to bring a clean bill.

These laws are of little importance, except with reference to the Mediterranean trade. British vessels clearing out from the United Kingdom for any place in the Mediterranean or West Barbary, or any other port subjected to quarantine regulations by Orders in Council, are to receive from the Customs Office a printed abstract of the existing regulations (6 Geo. IV. c. 78) for their guidance. Vessels from the Mediterranean and West Barbary, with clean bills, are to perform 15 days' quarantine, to which likewise are subjected ships communicating with such vessels, as also those which, though arriving from other ports of Europe or of America (without quarantine establishments), have on board susceptible articles, the produce of Turkey, Egypt, or Barbary. Vessels with foul or suspected bills are to perform 30 days' quarantine; and if pestilential disease shall appear during that time, the quarantine must commence anew. Ships from the Mediterranean and West Barbary, not having any infectious disorder on board, but without clean bills of health, are to repair to Standgate Creek or Milford Haven. But vessels bound to any port in the United Kingdom, on board of which the plague shall appear, are required immediately, if to the S. of Cape St Vincent, to repair to some lazaretto of the Mediterranean, and if to the N. of that cape, to Milford Haven. For other vessels liable to quarantine there are various stations throughout the United Kingdom.

These regulations form a serious and in most respects an unnecessary burden upon commerce. Plague is now said by many to be an epidemic merely; and, though the weight of authority is still in favour of its being also contagious, it is established to be so in a mode and degree much less than was formerly supposed. There is no distinct evidence of merchandise having ever acted as a conductor of plague; and the received distinction between susceptible and non-susceptible commodities is now held to be fanciful. Great doubts are also entertained as to the capability of the lower animals to communicate the disease. But, provided circumstances be favourable to the transmission of plague, it is still believed that it can be communicated by one person to another, as well as through the medium of the clothes and bedding of patients. The duration of quarantine is besides the subject of deep complaint: the virulence of plague, it is now admitted, must prevent its poison from remaining long latent in the human body; and, according to the most skilful observers at Malta and elsewhere, the disease usually appears from the third to the sixth day after communication; never after the fifteenth.

But popular jealousy, as well as the impracticability of effecting a beneficial change without the consent of all neighbouring countries, are obstacles to any alteration of the existing system. Thus, if without such a general agreement, the British government were to change the regulations at Malta, the pratique granted there would not be received elsewhere,—a circumstance which would be fatal to its transit trade, and also to its importance as a quarantine station, now daily increasing from the use of the overland journey to India *via* Egypt. It is probable, therefore, that no great alteration will ever be effected, except through medical commissioners, acting under the directions of the chief powers of Europe.

QUARTER, a measure of capacity for corn. [MEASURES.]

QUASSIA, an intensely bitter wood, obtained from two trees, the *Q. amara* of Guiana, and the *Q. excelsa* of Jamaica; though the produce of the former is now rare. It is imported in billets; but before being used is cut into chips, which are scentless, and of a light gray colour,—becoming yellow or brownish, however, by long exposure. It is used medicinally as a tonic, and, though forbidden by statute, by some brewers as a substitute for hops. Another variety, the *Q. simaruba*, yields the tonic bark called simarouba, imported in bales from the West Indies.

QUERCITRON BARK, an important yellow dye, the produce of a species of oak (*Quercus tinctoria* or *nigra*) indigenous to N. America.

QUICKSILVER. [MERCURY.]

QUILLS. [PENS.]

QUINCE, a yellow-coloured fruit, of an austere acid taste, the produce of a species of pear-tree (*Cydonia vulgaris*) indigenous to Crete, but common in France, particularly on the Garonne, and also in the S. of England. It is said to be the same with the celebrated apples of the Hesperides. Quince seeds abound in mucilage, and are an article of the materia medica.

QUININE, a white powdery vegetable alkaloid, extracted from the yellow Peruvian bark, and for which it is now advantageously substituted as a medicine.

QUINTAL, generally signifies the weight of a hundred pounds.

R.

RABBIT. [FURS.]

RACOON, a small species of bear (*Ursus lotor*), valued for its fur, which is used in hatmaking. Its hair is gray, soft, long, and thick, white in the middle, and black at the ends; eyes surrounded with black patches; tail annulated. It inhabits Jamaica and N. America, especially Kentucky.

RAGS (Du. *Lompen*. Fr. *Chiffes, Drapeaux, Drilles*. Ger. *Lumpen*. It. *Stracci, Strazze*. Por. *Farrapos, Trapos*. Rus. *Trepje*. Sp. *Trapos, Andrajos*), or tattered fragments of cloth, are of importance in the arts, more especially when of linen or cotton, for their use in papermaking. The rags of which British paper is made are mostly imported, chiefly from Hamburg, Bremen, Rostock, Ancona, Leghorn, Messina, Palermo, and Trieste. They arrive in our ports in closely packed bags, containing each about 4 cwts.; which, according to the respective qualities of the rag, are marked S. P. F. F., S. P. F., F. F., F. X., and F. B. There are, however, many varieties even in these divisions. About 10,000 tons are annually entered for home consumption. They are generally darker, dirtier, and coarser than the English, but on the other hand are valued from being chiefly linen, while those collected at home are mostly cotton. France, Holland, and Belgium prohibit the exportation of rags, in order to encourage their own long-established paper manufactories: Spain and Portugal likewise enforce a similar prohibition. Of late years, also, the shipments from Sicily have been checked by the imposition of an export duty of 2s. per cwt.; while those from Leghorn to this country have greatly declined, owing to the competing demand of the Americans. [PAPER.]

Woollen rags are commonly used as manure; but some kinds are unravelled, and, after being mixed up with fresh wool, manufactured again into coarse cloth.

RAILWAYS (Fr. *Chemins de fer*), made rudely of pieces of wood imbedded in the ordinary roads, so as to form wheel-tracks for facilitating the motion of carts and wagons, were introduced into the English mining districts in the 17th century; in the succeeding century these were gradually superseded by the plate-railway or tram-road; and edge-rails were introduced in 1801. Shortly afterwards the moveable steam-engine began to be employed instead of animal power for locomotion; but its powers were long very imperfectly developed; and railways continued in little use except for the conveyance of mineral produce to the place of shipment.

The epoch of the modern railway system is fixed at 1814, when George Stephenson invented the steam blast, the life-blood of the locomotive engine, and which increased its speed from 3 to 6 miles per hour. But the capabilities of a railway for the conveyance of passengers as well as merchandise, though indicated by the Stockton and Darlington Railway, 1825, were not fully established until 1829, shortly before the opening of the Liverpool and Manchester line, when a premium of £500, offered by the directors of this railway for the best steam-locomotive, was, after a keen competition among the most distinguished engineers, awarded to Robert Stephenson, the proprietor of the "Rocket," which, though weighing with tender only 7½ tons, drew 44 tons gross at 14 miles per hour. This was mainly effected by tubing the boiler,—an improvement which increased the evaporating power to three times that of the older engines, with 40 per cent. less consumption of fuel. The result was, that, though the principal inducement to establish the railway had been the traffic in goods, this was so far exceeded by the profit from passengers, that the company were enabled to meet great extra charges, and to divide regularly 10 per cent. annually upon their capital, although the outlay on the work was more than double the original estimate.

The signal success of this undertaking communicated a prodigious impulse to the railway system, not only in the United Kingdom but on the Continent and in America. In England, the leader in this "iron revolution," lines were speedily projected between all the great towns; improvements were made in the modes of constructing the road and laying down the rails; and the evaporating power of the engine was increased by enlarging the boiler and adding to the number of tubes, which, instead of 24 as at first, are now from 90 to 150 and upwards, exposing from 400 to 600 square feet of heated metal to the water, in addition to the area of the fire-box. The average speed of the passenger trains is about 30 miles an hour; but Marshal Soult, when in England, was carried at the rate of 60 miles: and the progress of improvement is such, that no limit can be placed to the rapidity, ease, and cheapness of conveyance by these splendid creations.

Formation of British Railways, Statistics, &c.

The British railways for general traffic have been all formed by joint-stock companies, acting under the sanction of parliament. Respectable projects commonly emanate from a few individuals interested in the line proposed; though the mass of original proprietors are almost always speculative adventurers. In carrying out the measure, directors of business-like habits and local influence are appointed, who allot themselves into sub-committees to look after the traffic, the surveying, the share-list, and the canvassing along the line, according to their qualifications. Having ascertained that there are no engineering difficulties of a marked character between the two termini, the next stage, if the share-list be found to fill, is to estimate the probable income. This is done by computing the amount of passengers, carriages, and goods passing at particular places on the line, and calculating the probable increase of this "direct traffic" from the cheapness and quickness of the railway, as well as the "contingent traffic" from other places, whence travellers and goods can be carried more advantageously by the proposed railway than wholly by a direct conveyance. In such computations some assistance may be derived from the progress of other undertakings; still, great discrimination will be necessary, as the increase of passengers—the main contributors to a railway—has, according to Mr Lecount, been in all proportions up to 80 to 1.

Meanwhile, the engineer will be engaged in the surveying and levelling. And in most cases a practised man will be able at once to decide upon the principal points of the course, as well with reference to the maximum of traffic, as the avoiding of curves, costly purchases, and expensive operations. As a general rule, a perfectly straight and level line is to be preferred when the termini are of equal elevation, or a uniform slope when one is higher than the other. But as it rarely happens that either of these can be obtained for any great distance without inconvenient and expensive deviations, the engineer so adjusts his inclinations, or *gradients*, as to make the nearest practicable approach to a level; avoiding loss of engine power from undulations, by making all the inclinations on one side of the summit point rise towards it, and all on the opposite side descend from it. The retarding effect of elevations is variously estimated; but it is a common theory that an elevation of 20 feet requires an exertion of power equal to that on a mile of level railway; so that the same power which would move a given load over one mile of railway rising 20 feet, or 1 in 264—the characteristic or ordinary gradient on the South Western, Brighton, South Eastern, and many other lines—would move the same load over two miles of level road; hence making the "equivalent distance" double the "actual distance." In conducting a railway over a considerable elevation, some engineers distribute the rise and fall as equally as possible throughout the whole line; others concentrate them in a few steep planes, where additional engines are used, and make the remainder comparatively level. Thus, in the London and Birmingham Railway, the ordinary gradient is 1 in 330, or 16 feet per mile, which is nowhere exceeded except in the extension from Camden Town to Euston Square. But the Liverpool and Manchester Railway, on the main line, has no gradient exceeding 1 in 849, except in two planes of about 1½ mile each, inclining 1 in 89 and 1 in 96, near Rainhill; nor has the Great Western, in a length of 117½ miles, a steeper gradient than 6½ feet per mile, or 1 in 812, except two inclined planes of 1 in 100; and on the Edinburgh and Glasgow line, the steepest is 1 in 880, with the exception of the inclined plane on approaching the latter city. Similarity in the gradients is essential to the economical working of a railway by inanimate power. If any inclination occur so steep that the ordinary power cannot ascend it by a reduction of speed, it must either be surmounted by the aid of auxiliary power, or the engine must run over other parts of the road with less than a maximum load, and consequently at an unnecessary expense.

While the engineer is engaged, the solicitor will have been feeling his way amongst the landholders and occupiers, so that refractory proprietors may if possible be avoided; and after a time he, the engineer, secretary, and directors, will throw all their information into one stock, and select that line which on the whole appears to be the best with reference to its gradients, geology, commercial importance, and the facilities it affords for constructing the works. These and all other preliminary matters require the greatest consideration, from the difficulty, delay, and expense of obtaining acts of parliament for railways, more especially under the present standing orders, which require the plans to be deposited with the Clerks of the Peace by March 1, and in the Private Bill-Office by April 1, in the year preceding that in which the application to parliament is made,—thus allowing a whole year (instead of 6 months as before 1837) for interested parties to consider the scheme, and prepare for opposing or advocating it. A general account of the existing regulations will be found under Company. Besides other powers, the Railway Act usually grants authority to borrow an additional sum, equal to one-third of the share-capital, if necessary.

The act being obtained, the land required is set out and purchased. Where exorbitant compensation is required, recourse is had to a jury, who commonly award a sum much less than that claimed. The excavations, embankments, tunnelling, and masonry for bridges, viaducts, and other erections, are then let to contractors; arranging if possible so that each will be enabled to use all his excavations in his embankments. The "formation level" being thus completed, is spread over with a stratum of broken stone or "ballast," on which firm dry foundation are placed the blocks or sleepers to which the rails are fastened; and the intervening spaces are afterwards filled up with the same material. The ordinary standard width of the rail-tracks, both in Britain and the United States, is 4 feet 8½ inches; but a few in this country are nearly 6 feet; and the gauge of the Great Western was fixed by Mr Brunel at 7 feet, in order to allow scope for improvements in power, speed, stability, and convenience; but this is generally considered to be beyond the most advantageous width. The distance between the tracks is of inferior consequence.

The expense of constructing English railways, all with double tracks, has varied under different circumstances from £10,000 to £50,000 per mile. The annual charges are also extremely variable,—railway expenses being indeed as yet but imperfectly understood. But the experience of several undertakings in this country and in Belgium coincide pretty closely in showing the average proportion of the annual receipts to the annual expenditure to be nearly as 2 to 1. It will be seen from the subjoined table, that in general long lines have been the most profitable.

In the United Kingdom about 3000 miles of railway have been sanctioned by acts of parliament; upwards of two-thirds of which are intended for the conveyance of passengers and goods by steam-power; and of these last nearly 1300 miles are in operation. The amount of capital invested in these undertakings may be stated at from £60,000,000 to £70,000,000.

In the United States about 3500 miles were in operation in 1840; and the average expense of their formation was only about £5000 per mile, arising partly from the cheapness of land and timber, and partly from their being in great part only single tracks, and in other respects of inferior construction. Comprehensive railway systems have been formed by the governments of Belgium and France. Important lines are also in progress in Germany, Austria, and Italy. And they have been introduced into Russia, Canada, Cuba, Egypt, and other parts,—the engineers being frequently, and the rails and locomotives generally, from England.

The following table shows the amount expended on the principal Railways in the United Kingdom, their weekly receipts, and other particulars, as in Sept. 1842:—

	Year Opened.	Length Opened.	Amount Expended.	Paid per Share.	Price of Share.	Dividend per Cent.	Weekly Receipts.
			£	£	£	£	£
1 Arbroath and Forfar	1839	15	136,705	25	22	3½	194
2 Birmingham and Derby Junction	1839	48½	1,113,481	100	40	1½	1,570
3 Birmingham and Gloucester	1840	55	1,438,370	100	40		2,121
4 Brandling Junction	1839	25	434,824	50		4½	812
5 Chester and Birkenhead	1840	14½	456,663	50	20	2	626
6 Dublin and Kingstown	1834	6	340,262	100		5	1,034
7 Dundee and Arbroath	1840	16¾	143,552	25	18	5	274
8 Eastern Counties	1840	17½	2,104,054	23	8½	2	1,170
9 Edinburgh and Glasgow	1842	46	1,383,077	50	48	5	1,998
10 Glasgow, Paisley, and Ayr	1840	40	930,435	50	34	3½	1,134
11 Glasgow, Paisley, and Greenock	1841	22½	709,116	25	18	1	922
12 Grand Junction	1837	83¾	2,280,590	100		10	7,887
13 Great North of England	1841	45	1,201,670	100	55	2½	1,433
14 Great Western	1840	181¼	6,435,671	65	82½	6	14,661
15 Hayle		18	125,000	100			175
16 Hull and Selby	1840	31	634,994	50		3	1,100
17 Lancaster and Preston	1840	20½	435,399	47		3	——
18 Liverpool and Manchester	1830	31	1,515,255	100	182	10	4,582
19 London and Birmingham	1838	112½	5,867,504	90	183	10	18,062
20 London and Blackwall	1840	3¾	1,141,538	16⅝	7		927
21 London and Brighton	1840	56	2,473,379	50	34	2	4,499
22 London and Croydon	1839	10½	618,748	13¾	10½		343
23 London and Greenwich	1838	3¾	966,239	12¾	4¾	¾	739
24 London and South-Western	1840	92¾	2,565,531	38¾	58	7 1/10	7,133
25 *Manchester and Birmingham	1840	31	1,762,931	40	20½		2,647
26 Manchester and Bolton	1838	10	777,956	93		3 1/10	561
27 Manchester and Leeds	1841	50	2,913,110	70		5½	5,121
28 Midland Counties	1840	57	1,679,959	100	61	3	3,206
29 Newcastle and Carlisle	1839	61		100		6	1,695
30 Newcastle and North Shields	1839	7	232,077	45		6	376
31 North Midland	1840	72¾	3,297,704	100	57	2	5,705
32 North Union	1838	22	612,829	75		6¾	1,346
33 *Northern and Eastern	1840	32½	758,653	45		4½	1,300
34 *Preston and Wyre	1840	19	317,695	50		4	331
35 *Sheffield and Manchester		7	404,656	82½			302
36 *South Eastern		47	1,075,468	50	21¾		1,518
37 Taff Vale	1841	30	539,723	100		2¾	554
38 Ulster	1839	24	314,302	25		3¾	386
39 York and North Midland	1840	27	631,941	50	90	10	1,845

A duty of ⅛d. per mile per passenger was formerly exacted on British railways; but, since August 1842, it has been levied at the rate of 5 per cent. on the gross receipts from this source (5 & 6 Vict. c. 79). The Board of Trade is vested with a controlling power over these works by the acts 3 & 4 Vict. c. 97, and 5 & 6 Vict. c. 55, which likewise contain numerous regulations for their management.

Further information on the subject of this article will be found in the "Practical Treatises" of Mr Wood and Lieutenant Lecount.

RAISINS (Fr. *Raisins secs ou passés*. Ger. *Rosinen*. It. *Uve passe*. Por. *Passas*. Rus. *Issum*. Sp. *Pasas*), dried grapes. They are distinguished by the places where produced or exported,—as Malaga, Valencia, and Smyrna; or from the variety of grape or mode of preparation,—as muscatels, blooms, sultanas, lexias, and raisins of the sun. The latter are dried by solar heat alone; inferior kinds are dried in ovens; but the most common way is to dip the grapes in a hot lixivium of water and wood ashes (those of the vine branches or tendrils being preferred) and a little olive-oil, and afterwards expose them to the sun. In the ley used for the Valencia lexias, a little slacked lime is also used. The finest in quality are the Malaga muscatels; the lowest the black Smyrna raisins. About 200,000 cwts. are annually entered for home consumption in the United Kingdom; of which about ¾ths are imported from Spain, and ¼th from Turkey,—the latter being shipped entirely at Chesmé and Vourla, near Smyrna, except the sultanas, a small fine species exported from Smyrna itself.

The drum of raisins is about 24 lbs. The cask of Malaga, 1 cwt.; of Turkey, 2¼ cwts. The box of Malaga, 22 lbs.; of Valencia, 56 lbs.

RAPESEED (Dan. *Roefrö*. Fr. *Graine denavette*. Ger. *Rapsaat*) is the produce of a hardy biennial plant of the cabbage tribe (*Brassica napus*), extensively cultivated on the Continent. It is chiefly valued for the oil which is extracted from it by grinding and pressure; and from 600,000 to 1,000,000 bushels are annually imported for consumption in the United Kingdom—principally from Denmark, though to some extent also from Germany and Russia. [Oil.] In Essex, Lincoln, and Cambridge, rape is reared for its stems and leaves, which are used in feeding sheep.

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* The railways thus denoted are not yet opened through their whole course.

Rapeseed Cake is employed, like linseed cake, on the Continent to feed cattle and pigs; considerable quantities of it are likewise brought to this country to be used as manure.

RASPBERRY, the fruit of the *Rubus Idæus*, a native of Britain and other parts of Europe, extensively used by the cook and the confectioner, also in the preparation of cordial spiritous liquors.

RATAFIA, a spiritous compound of fruit kernels, spices, and brandy.

RATTANS, or CANES, are gigantic reeds, the produce of different species of palms (*Calamus ratang*, &c.), principally found on the Malay peninsula and archipelago, where they grow in the forests, climbing over trees to a greater extent than any other known plants. They are to be chosen long, well glazed, of a bright yellow colour, of a small size, and not brittle. They are generally sold in bundles, each containing 100. About 4,000,000 rattans are annually imported into this country, where they are chiefly valued for the hard coating of their stems, which are split into strips, and manufactured into chair-bottoms and similar articles.

REAL, a Spanish coin in vellon = 2½d.; also a money of account = 4¾d.

REALGAR, a red sulphuret of arsenic; brittle, inodorous, tasteless, and insoluble in water. Sp. gr. 3·34. It is found in Bohemia and Saxony, and is used as a colouring substance, as well as in pyrotechnical compounds.

RE-ASSURANCE, a contract by which an insurer is protected by other underwriters against the risks he has undertaken.

REBATE or RABAT, a per centage deduction from a stipulated price.

RECEIPT or ACQUITTANCE, a document acknowledging that he who signs it has received a sum of money or any other subject of claim, and releasing the party to whom the acquittance is granted. A receipt for money is strong evidence of its having been paid, but is not incontrovertibly conclusive; leaving it open to proof by the granter that the money has not been received, or that he granted the receipt under misrepresentation. In England, an indorsement on a deed, of a receipt of a sum of money, is not conclusive, the deed itself in its contents not stating such receipt: and it may be shown that in fact the money was not paid. The indorsement, not being under seal, cannot amount to an estoppel, but can only be evidence for the jury, capable of being rebutted by other circumstances in the case (*Philips on Evidence*, 388-9). A general receipt or acquittance, "in full of all demands," is held in England to discharge all debts, except such as are on specialty, as bonds, bills, &c., which can only be met by some specialty of equal force, such as a general release. Receipts must be duly stamped, otherwise, by 23 Geo. III. c. 49, § 14, they cannot be received in evidence; and by 35 Geo. III. c. 55, § 8, all and every person or persons who shall write or sign, or cause to be written or signed, any receipt, &c., not duly stamped, forfeits £10, in case the sum discharged does not amount to £100; and £20, in case it amount to £100 and upwards. By § 9, any person stating a false sum in the receipt, dividing the sum into small portions, or otherwise attempting evasion, is liable in a penalty of £50. By § 11, if a receipt is brought to the Commissioners of Stamps, within fourteen days after its date or issue, it may be stamped on payment of £5 over and above the duty; if beyond fourteen days, and within one calendar month, on payment of £10 over and above the duty. By § 10, the commissioners are prohibited from stamping receipts otherwise than on these terms. By 43 Geo. III. c. 126, § 5, any person who has paid a sum of money which requires a receipt-stamp, may produce the proper stamped paper, and may require the receiver to grant a receipt on it, and pay the stamp-duty, which, if he refuse, he renders himself liable in a penalty of £10. By 55 Geo. III. c. 184 (schedule), a receipt, which bears to be "in full of all demands," is liable, whatever be the amount of the transactions settled, to a duty of 10s. A receipt is available, if stamped with a higher rate of duty than that assigned to it (43 Geo. III. c. 126, § 6). By 35 Geo. III. c. 55, § 7, "every memorandum or writing whatever, given to any person or persons for or upon the payment of money, which shall contain or express, or in any manner signify or denote any acknowledgment of any part of any debt, claim, account, or demand being paid, settled, received, accounted for, balanced, discharged, released, or satisfied, whether the same shall or shall not be satisfied by or with the name or names of the person or persons by or on whose behalf the same shall be given, is liable to stamp." An acknowledgment of having received the acceptance of a bill of exchange in payment requires a receipt-stamp. But the expressions "Mr T. has left in my hands," and "I have received a bill, &c., to recover," &c., not being given for or upon the payment of money, are held not to require stamps (Langdon *v.* Wilson, 2 *Man. & R.*, 10). A receipt for a given sum requires only a stamp to meet that amount, though it make mention of other sums. A written acknowledgment at the foot of an account, that such account "is correct," may be given in evidence without being stamped. (Wellard *v.* Moss, 7 *Moore*, 503. *Philips on Evidence. Sir E. L. Tomlins' L. D.* voce *Acquittance. Chitty on the Stamp-Laws.*)

RE-EXCHANGE, the price of a new exchange due on a protested bill.

REGISTRATION—CLAUSE OF, in the law of Scotland, is a form of clause applicable to obligatory deeds, authorizing them to be recorded in the books of a court having jurisdiction to put the deed in force. When the deed is so registered in terms of the clause, it may be enforced as if it were a decree of the court.

REGISTRY OF SHIPS. Before a ship is ready for sea, the property of it is in the same situation as that of any other moveable; but whenever it becomes fitted for its proper purpose, all rights connected with it are, by a law extending over the whole of the British dominions, held under a system of custom-house registration; a compliance with the provisions of which is besides necessary to entitle a vessel to the privileges of a British ship under the navigation laws. The registry of ships was introduced into this country by the Navigation Act of 1660. [NAVIGATION LAWS.] It was afterwards the subject of various acts; and at length the whole were consolidated and reduced to a system. The existing regulations are embodied in a statute passed in 1833, of which the following is a very full abstract:—

Abridgment of an Act for the Registering of British Vessels, viz. 3 & 4 Wm. IV. c. 55, with the Alterations of the Act 1 & 2 Vict. c. 113.

§ 1. Act 6 Geo. IV. c. 110, and succeeding acts consolidated.

Certificate and General Regulations, § 2. No vessel is entitled to any of the privileges of a British-registered ship, unless it have been registered in virtue of the act 4 Geo. IV. c. 41, or the act 6 Geo. IV. c. 110, or be registered in terms of this act, and a certificate of registry be obtained in the statutory form.

§ 3. The following are the persons authorized to make registry and grant certificates for vessels in their respective places:—The collector and comptroller of the customs in any port in the United Kingdom, and in the Isle of Man, respectively: The principal officers of the customs in Guernsey or Jersey, together with the governor, lieutenant-governor, or commander-in-chief of those islands, respectively: The collector and comptroller of any port in the British possessions in Asia, Africa, and America, or the collector where there is no comptroller: The collector of duties at any port in the territories under the government of the East India Company, within the limits of their charter, or any other person of the rank in their service of senior merchant, or of six years' standing in their service, appointed to act in execution of the act: The collector at any British possession within the said limits, together with the governor, lieutenant-governor, or commander-in-chief: The governor, lieutenant-governor, or commander-in-chief of Malta, Gibraltar, Heligoland, and Cape of Good Hope, respectively [repealed as to Cape of Good Hope, a collector having been appointed, 1 & 2 Vict. c. 113, § 15]. No vessel can be registered at Heligoland, except it be wholly of the build of that place; and vessels, after having been registered at Malta, Gibraltar, or Heligoland, cannot be registered elsewhere. Vessels registered at Malta, Gibraltar, or Heligoland, are not entitled to the privileges of British ships in any trade between the United Kingdom and any of the British possessions in America. Wherever the act makes provision as to collectors and comptrollers of the customs, the provisions extend to all the above-named officials in their respective circumstances; and all provisions as to commissioners of the customs apply to the governor, lieutenant-governor, or commander-in-chief of any place abroad where vessels may be registered.

§ 4. Vessels not duly registered, and not having obtained certificate, exercising any of the privileges of a British ship, are liable to forfeiture.

§ 5. No ship can be duly registered by virtue of this act, except such as are wholly of the build of the United Kingdom, or of the Isle of Man, or of Guernsey or Jersey, or of some of the colonies, plantations, or territories in Asia, Africa, or America, or of Malta, Gibraltar, or Heligoland, or such as may have been condemned as prizes, or for breach of the laws for the prevention of the slave-trade, and which wholly belong to British subjects.

§ 6. Mediterranean Pass (now in disuse) may be issued at Gibraltar and Malta for certain ships belonging to these places.

§ 7. No vessel can retain the privileges of a British ship after having been repaired in a foreign country, if the repairs exceed the sum of 20s. for every ton of the burden, unless they have been necessary by reason of extraordinary damage sustained during absence from the British dominions, to enable her to perform her voyage, and to return to some place in the said dominions; and whenever any vessel so repaired in a foreign country arrives at any port in the British dominions as a British-registered ship or vessel, the master or other person having the charge must, upon the first entry, report to the collector and comptroller that the vessel has been so repaired, under penalty of 20s. per ton; and if it be proved to the satisfaction of the Commissioners of the Customs that such vessel was seaworthy at the time when she last departed from any place in the British dominions, and that no greater repairs have been done than were necessary, they may, upon full consideration of circumstances, direct the collector and comptroller to certify on the certificate that it has been proved to the satisfaction of the commissioners that the privileges have not been forfeited, notwithstanding the repairs.

§ 8. Any registered vessel, declared to be stranded or unseaworthy, and incapable of being recovered or repaired to the advantage of the owners, and for such reasons sold by order of a court for the benefit of the owners or others, is deemed a vessel lost or broken up within the meaning of the act, and can never again be entitled to the privileges of a British-built ship.

§ 9. No British ship becoming prize to an enemy or sold to foreigners can again be entitled to the privileges.

§ 10. No registry can be made in any other port or place than that to which such vessel belongs (except of vessels condemned as prizes in Guernsey, Jersey, or Man, which must be registered as pointed out below); and any registry made contrary to these provisions is null, unless the proper officers be specially authorized to make such registry in any other port by order of the commissioners. At every port of registry a book must be kept by the collector and comptroller, in which all the particulars contained in the form of the certificate must be entered; and every registry must be numbered in progression, beginning at the commencement of each year; and the collector and comptroller must, within one month, transmit to the commissioners a true copy, with the number of certificates granted.

§ 11. Every vessel is deemed to belong to some port at or near which some, or one, of the owners, who make and subscribe the declaration required before registry, resides, and when such owner or owners transfer all his or their shares, the vessel must be registered *de novo* before sailing from the port to which she then belongs, or from any other port in the same part of the United Kingdom, or the same colony, plantation, island, or territory; but if the owner or owners cannot in sufficient time comply with these requisites, so that registry may be made before it be necessary to sail, the collector and comptroller of the port where the vessel may then be, may certify upon the back of the existing certificate, that the same is to remain in force for the voyage. In the case of a vessel built in any of the foreign possessions of the crown for owners residing in the United Kingdom, if the master or the agent for the owners produce to the collector and comptroller of the port at or near to which the vessel was built, the certificate of the builder required by the act, and subscribe a declaration of the names and descriptions of the principal owners, bearing that she is the identical vessel mentioned in such certificate, and that no foreigner, to the best of his knowledge and belief, has any interest therein, the collector and comptroller shall cause the vessel to be surveyed and measured, and give the master a certificate under their hands and seals, stating when, where, and by whom the vessel was built, the description, tonnage, &c., which certificate has the force of a certificate of registry for two years, unless the ship sooner arrive in the United Kingdom.

§ 12. No person who has taken the oath of allegiance to a foreign state, except under the terms of some capitulation, unless he afterwards become a denizen or naturalized subject of the United Kingdom, nor any person usually residing in any country not under the dominion of the British crown, unless he be a member of some British factory, or agent for or partner in any house or copartnership actually carrying on trade in Great Britain or Ireland, is entitled to be the owner, in whole or in part, directly or indirectly, of any vessel registered by virtue of this act.

Owner's Declaration, § 13. Before registry and certificate, a declaration, describing the ship, owners, and master, and that no part of the vessel belongs to foreigners, must be made and subscribed (according to a form given in the act) before the proper officer—by the owner, if the vessel is owned by one person; or in case there be two joint-owners, by both, if both be resident within twenty miles of the place where the registry is required, or by one if one or both be resident at a greater distance; or if the number exceed two, then by the greater part of the number if the greater number reside within twenty miles; but the number is not in any case to exceed three, unless a greater number be desirous to join in subscribing the declaration, and one is sufficient if all, or all except one, be resident at a greater distance than twenty miles.

§ 14. In case the required number of owners do not personally attend to subscribe the declaration, such as personally attend must further declare that the part-owners then absent are not resident within twenty miles of the place, and have not, to the best of their knowledge or belief, wilfully absented themselves to avoid making the declaration, or are prevented by illness from attending.

Survey and Measurement, § 15. To enable a proper certificate to be granted, it is provided that, previous to the registering, some one or more persons appointed by the commissioners are to go on board, and strictly and accurately examine and admeasure the vessel as to every particular contained in the form of the certificate, in the presence of the master, or any other person appointed on the part of the owners, or in their absence by the master; and they must deliver a true account in writing of all such particulars of the build, description, and admeasurement, as are specified in the form of the certificate, to the collector and comptroller; and the person attending on the part of the owners is required to sign his name to the certificate, in testimony of its truth, if he agree with the particulars thereof.

§§ 16, 17, and 18, containing provisions for measurement, are repealed by 5 & 6 Wm. IV. c. 56; for which see TONNAGE.

§ 19. Whenever the tonnage is ascertained according to the prescribed rules (except in the case of vessels admeasured afloat), the same is ever after deemed the tonnage, and must be repeated in every registry, unless any alteration be made in the form and burden, or it be discovered that the tonnage had been erroneously taken.

Bond, § 20. At the obtaining of the certificate, security by bond must be given (by the master and such of the owners as personally attend, as above) to the satisfaction of the registering officers, in the penalties following, viz. If the vessel be decked or be above the burden of 15 and not exceeding 50 tons, in £100; if exceeding 50 and not exceeding 100 tons, in £300; if exceeding 100 and not exceeding 200 tons, in £500; if exceeding 200 and not exceeding 300 tons, in £800; and if exceeding 300 tons, then in the penalty of £1000. The conditions of every such bond are as follows:—that the certificate shall not be sold, lent, or otherwise disposed of to any person, but shall be solely made use of for the service of the vessel for which it is granted; and that in case she be lost, taken, burnt, or broken up, or otherwise prevented from returning to the port to which she belongs, or shall on any account have lost her privileges, or shall have been seized and condemned for illicit trading, or shall have been taken in execution for debt and sold by process of law, or shall have been sold to the crown, or shall under any circumstances have been registered *de novo*, the certificate, if preserved, shall be delivered up, within one month after the arrival of the master in any place in the British dominions, to the collector and comptroller of some port in Great Britain, or of the Isle of Man, or of the British plantations, or to the governor, lieutenant-governor, or commander-in-chief for the time being of Guernsey or Jersey; and that if any foreigner, or any person for the use and benefit of a foreigner, purchase or otherwise become entitled to any interest in the vessel, and the same shall be within the limits of any port of the British dominions, as above, the certificate shall, within seven days after the transfer, be delivered up to the persons authorized to make registry and grant certificate of registry at the place; and that if the vessel be in any foreign port when such transfer takes place, the certificate shall be delivered to the nearest British consul or other chief British officer, or that if the vessel be at sea when such transfer takes place, the certificate shall be delivered to the nearest British consul or other chief British officer at the first foreign port at which he arrives, immediately on arrival, or, if he arrive at any port of the British dominions, to the proper officer, within fourteen days after arrival. If it happen that at the time of registry the vessel be at any other port than that to which she belongs, so that the master cannot attend to join with the owners in the bond, he may give a separate bond at the port where the vessel may then be, to be transmitted to the port of registration.

§ 21. When the master is changed, the master or owner must deliver the certificate to the proper officers, at the port where the change takes place, who indorse a memorandum of the change, and give notice to the proper officer of the place of registration, who makes a memorandum in the book of registers, and gives notice thereof to the commissioners. The new master must give bond as above, before his name is indorsed.

§ 22. The bonds are liable to the same stamp as bonds given for the duties of customs.

§ 23. Any person detaining the certificate contrary to the conditions of the bond, is liable to the penalties in the bond.

Name of Vessel, § 24. No name can be given to a vessel other than that by which she was first registered; and before a vessel, after registry, begins to take in any cargo, the name, as registered, and her port, must be painted, in white or yellow letters, of a length of not less than four inches, upon a black ground, on some conspicuous part of the stern, in a distinct and legible manner, and must be so kept and preserved; and if the owner or master, or other person in charge, permit the vessel to begin to take in any cargo before the name has been so painted, or wilfully alter, erase, obliterate, or conceal, or permit the same to be done (unless in the case of square-rigged vessels in time of war), or in any document describe such vessel by any other than the registered name, or describe, or permit the vessel to be described, by any other name to any revenue officer, he forfeits £100.

Builder's Certificate, § 25. Every person applying for a certificate is required to produce a full account, under the hand of the builder, of the proper denomination, and of the time when and the place where the vessel was built, and an exact account of the tonnage, together with the name of the first purchaser (which account the builder is required to give under his hand on demand), and to subscribe a declaration that the vessel for which the certificate is required is the same with that described by the builder. [By 1 & 2 Vict. c. 113, § 11, where the builder cannot be found, the commissioners may take any other satisfactory evidence.]

Lost Certificate, § 26. If the certificate be lost or mislaid, and proof thereof be made to the satisfaction of the commissioners, they may permit the vessel to be registered *de novo*, and a certificate to be granted; provided that, if the vessel be far distant from the port to which she belongs, or from the absence of the owners, or any other impediment, registry cannot be made in sufficient time, the commissioners may grant a license for present use, which, for the time and to the extent specified, will be of the same force as a certificate. Before registry *de novo* is made, the owners and master must give bond to the commissioners in such sum as they may require, that if the certificate be afterwards found, it shall be delivered to the proper officers, and that no illegal use has been or shall be made thereof with his or their privity. Before such license is granted, the master must subscribe a declaration that the vessel has been registered, naming the port and the time, and all the particulars in the certificate, to the best of his knowledge and belief, and must give such bond and with the same condition as is before mentioned. Before a license is granted, the vessel must be surveyed; and the certificate of survey must be preserved by the collector and comptroller of the port to which she belongs; and in virtue of it the commissioners may permit the vessel to be registered after her departure, whenever the owners personally attend to subscribe the declaration, and comply with the other requisites of the act, except so far as relates to the bond by the master. The certificate of registry may then be transmitted to the collector and comptroller of any other port, to be given to the master on his giving bond and delivering up the license.

Detaining Certificate, § 27. When a person keeps a ship's certificate in his possession contrary to this act, and refuses to deliver it up to the proper officers of the customs, or the master or owners, complaint may be made on oath to any justice residing near the place in Great Britain or Ireland, or to any member of the supreme court of justice or any justice of the peace in any of the possessions abroad, who must grant warrant to cause the person complained against to be brought before him; and if it appear, on examination or otherwise, that the certificate is not lost or mislaid, but is wilfully detained, such person shall forfeit £100, and on failure of payment must be committed for not less than three nor more than twelve months. On the magistrate certifying the conviction, registry and certificate may be granted of new, there being indorsed on the latter the ground upon which the ship or vessel was so registered *de novo*. If the person detaining the certificate have absconded, and proof thereof be made to the satisfaction of the commissioners, they may permit the vessel to be registered *de novo*, or in their discretion to grant a license as above.

Alteration on Ship, § 28. If any ship, registered pursuant to the act, be altered so as not to correspond with all the particulars in the certificate, she must be registered *de novo*, as soon as she returns to the port to which she belongs, or to any other port in the same part of the United Kingdom, or in the same colony, plantation, island, or territory; on failure, the vessel to be, to all intents and purposes, considered as not duly registered.

Condemned Vessels, § 29. The owners of vessels condemned as lawful prize in any court of admiralty, or condemned for breach of the laws for the prevention of the slave-trade, must, for the purpose of registering, produce to the collector and comptroller a certificate of condemnation, and a true account in writing of all the particulars contained in the certificate, as above set forth, to be made and subscribed by skilful persons appointed by the court to survey the vessel, and must subscribe a declaration before the collector and comptroller, that the vessel is the same which is mentioned in the certificate of the judge.

§ 30. Condemned vessels cannot be registered in Guernsey, Jersey, or Man, and must be registered at Southampton, Weymouth, Exeter, Plymouth, Falmouth, Liverpool, or Whitehaven.

Transfers and Shares, § 31. As between British subjects, property in registered ships can only be transferred by bill of sale or other instrument in writing, containing a recital of the certificate, or the principal contents thereof, and a transfer of any other kind is not valid or effectual for any purpose whatever; but no bill of sale is deemed void by reason of any error in the recital, or by the recital of any former certificate instead of the existing one, provided the identity of the vessel be effectually proved thereby.

§ 32. The property in every vessel, of which there are more owners than one, is considered as divided into 64 shares, and the proportion held by each must be described as being a certain number of 64th parts or shares; and no person is entitled to be registered as an owner in respect of any proportion which is not a 64th part or share; and, upon the first registry of any vessel, the owners subscribing the declaration before registry must declare the number of shares held by each, and the same shall be so registered accordingly. If it at any time happen that the property of any owner cannot be reduced into any number of 64th shares, the owners of fractional parts may transfer them one to another, or jointly to any new owner, by memorandum upon their respective bills of sale, or by fresh bill of sale, without such transfer being liable to stamp-duty. The right of any owner to any fractional part is not to be affected by reason of it not having been registered. Any number of owners, named and described in the registry, being partners in any trading-house, may hold any vessel, or any share or shares of any vessel, in the name of the copartnership, as joint-owners, without distinguishing the proportionate interest of each; and the property so held is in every respect partnership property.

§ 33. No more than thirty-two persons are entitled to be owners at the same time of any vessel, as tenants in common, or to be registered as such; but this does not affect the equitable title of minors, heirs, legatees, creditors, or others, exceeding that number, duly represented by or holding from any of the persons within the said number, registered as legal owners; and if it be proved to the satisfaction of the commissioners that any number of persons have associated themselves as a joint-stock company, for the purpose of owning as joint-property, and that they have appointed any number, not less than three, of their members to be trustees of such property, the trustees, or any three of them, with permission of the commissioners, may subscribe the declaration before registry, instead of the names and descriptions of the other owners, stating those of the company.

§ 34. No bill of sale or other instrument is effectual to affect any vessel, until produced to the collector and comptroller of the port of registry, or of any other port at which she is about to be registered *de novo*, nor until they have entered in the book of the last registry, in the one case, or in the book of registry *de novo*, after all the requisites for such registry *de novo* shall have been duly complied with, in the other case, the name, residence, and description of the vender or mortgager, the number of shares transferred, the name, residence, and description of the purchaser or mortgagee, and the date of the document, and of the production of it; and further, if the vessel is not about to be registered *de novo*, the collector and comptroller of the port of registry must indorse the particulars on the certificate when produced to them in the following form, viz.:—

"Custom-house [port and date; name, residence, and description of vender or mortgager] has transferred by [bill of sale or other instrument] dated [date, number of shares] to [name, residence, and description of purchaser or mortgagee.]

A B, Collector.
C D, Comptroller."

If desired so to do, and if the instrument be produced for that purpose, the collector and comptroller must certify, by indorsement thereon, that the particulars have been entered and indorsed as above.

§ 35. So soon as the particulars are entered in the registry, the property is transferred as against all persons, and to all intents and purposes, except such subsequent purchasers and mortgagees as first procure the indorsement to be made upon the certificate in manner after mentioned.

§ 36. After the particulars have been so entered, the collector and comptroller shall not enter the particulars of any other transfer by the same vender or mortgager of the same vessel or share, to any other person, unless thirty days elapse from the former entry; or in case the vessel was absent from her port at the time of the former entry, unless thirty days have elapsed from the day of her arrival at her port. In case the particulars of two or more bills of sale, &c., have been entered, a similar period must follow the last entry, or the arrival, before another entry; and in every case where there at any time happen to be two or more transfers by the same owner of the same property in any vessel entered, the collector and comptroller must indorse upon the certificate the particulars of that bill of sale, &c., under which the person claims who shall produce the certificate for that purpose within thirty days after the entry of his bill of sale, or within thirty days after the return of the vessel to her port, in case of her absence; and in case no person produces the certificate within the period, the collector and comptroller must indorse to such person as may first produce the certificate for that purpose, it being the intent of the act that the several purchasers and mortgagees have priority, not according to the entries of the bills of sale, &c., but according to the time of the indorsement on the certificate. Provided that, if the certificate be lost, mislaid, or detained, so that the indorsement cannot in due time be made, and proof thereof be made by the purchaser or mortgagee, or his known agent, to the satisfaction of the commissioners, they may grant such further time as may appear necessary for its recovery, or for registry *de novo*, and thereupon make a memorandum in the book of registers of the further time so granted, and during such time no other bill of sale shall be entered for the transfer of the same vessel, or the same share, or for giving the same security.

§ 37. If the certificate of registry be produced to the collector and comptroller of any port where the vessel may be, together with a bill of sale, containing a notification of record, by the collector and comptroller of the port to which the vessel belongs, they may indorse on it the transfer in the bill, and the collector and comptroller of the port to which the vessel belongs, receiving notice, shall record the same, inserting the name of the port at which the indorsement was made. But the collector and comptroller so applied to must first give notice to those of the port to which the vessel belongs, who must give them information, whether any and what other bills of sale have been recorded; and the collector and comptroller, on receiving such information, proceed as they would do if the port were that to which the vessel belongs.

§ 38. If it become necessary to register any vessel *de novo*, and any share have been sold since she was last registered, without the transfer being recorded and indorsed, the bill of sale must be produced to the collector and comptroller, who are to make registry, otherwise the sale cannot be noticed in such registry *de novo;* but, upon the future production of the bill of sale, and the existing certificate, the transfer may be recorded and indorsed as well after registry *de novo* as before.

§ 39. If upon any change of property in a vessel the owners desire to have her registered *de novo*, although not required by the act, and the proper number attend at the custom-house at the port to which she belongs, the collector and comptroller may make such registry, and grant certificate under the above regulations.

§ 40. Every collector and comptroller is bound, upon reasonable request by any person or persons, to produce for inspection any oath, the declaration, or register, required by the act relative to any vessel, and permit extracts to be taken, which, on being verified, are evidence in courts of justice, without requiring production of the originals or the attendance of officials.

§ 41. If the property in a vessel, belonging to any person out of the kingdom, be sold in his absence by his known agent or correspondent, under his directions expressed or implied, and acting for his interest, the agent executing a bill of sale, without having received a legal power to do so, the commissioners, upon application made to them, and proof of the fair dealings of the parties, may permit the transfer to be registered, or to be recorded and indorsed, as the case may be, as if legal power had been produced; and if it happen that a bill of sale cannot be produced, or, by reason of distance of time, or the absence or death of parties, it cannot be proved that a bill of sale had been executed, and registry *de novo* shall have become necessary, the commissioners, upon proof of the fair dealings of the parties, may permit the vessel to be registered *de novo*, as if a bill of sale had been produced. In any of these cases, however, sufficient security must be given to produce a legal power or bill of sale within a reasonable time, or to abide the future claims of the absent owner and his representatives, and at the future request of the party whose property has been so transferred, the bond must be available for the protection of his interest, in addition to any right which he may have against the vessel or the parties.

§ 42. When any transfer is made only as a security, either by way of mortgage or of assignment to trustees for the purpose of sale for payment of a debt, the collector and comptroller of the port of registry must, in the entry, and in the indorsement on the certificate, express that the transfer was made only in security by way of mortgage, and the holders are not to be deemed to be the owners, nor the persons making the transfer to be deemed to have ceased to be owners, any more than if no such transfer had been made, except so far as may be necessary for the purpose of rendering the property available by sale or otherwise for the payment of the debt.

§ 43. When any transfer in security has been duly registered according to the provisions of the act, the interest of the mortgagee or other assignee cannot be affected by any act of bankruptcy committed by the mortgager or assigner, after the time of registration, notwithstanding such mortgager or assigner, at the time of becoming bankrupt, has the vessel or share in his possession, and is reputed owner.

§ 44. Every governor, lieutenant-governor, or commander-in-chief of any of the British possessions abroad, is required, if a suit be commenced in any court where he governs, touching the force and effect of any register, upon representation, to cause all proceedings to be stayed, if he shall see just cause so to do, until the decision of the king in council be known and certified to him; and such governor is required to transmit to one of the secretaries of state an authenticated copy of the proceedings, with his reasons for causing them to be stayed, and such documents (properly verified) as he may judge necessary for the information of his majesty.

§ 45. Persons making declarations, or counterfeiting, erasing, altering, or falsifying any writings required by the act, or wilfully using falsified documents, or wilfully granting any certificate or other instrument, knowing it to be false, forfeit £100.

§ 46. *Penalties and Forfeitures* are recovered and disposed of in the same manner as those incurred by the Custom-House Regulations.

[By 1 & 2 Vict. c. 113, § 12-14, if a British vessel be lost, or by change of property, &c., ceases to be a British vessel, the owners must immediately, on their becoming acquainted therewith, give notice to the collector and comptroller at the port of registry. Where a British vessel has been absent from her port for three years, they must give notice stating the cause of absence, and that she has not forfeited her privileges. Failure to comply, or falsehood, renders the party liable to a penalty of £5.]

REGRATING, buying and selling again commodities in the same market.

RENTE, in the French funds, is a term synonymous with annuity.

RESERVE, in Banking, the portion of capital kept to meet current demands.

RESINS, a class of inflammable substances, of vegetable origin, of which common *rosin* furnishes an example. They are solid, brittle, of a certain degree of transparency, and a colour commonly inclining to yellow. When pure, they are soluble in alcohol and in oils, but not in water, in which respect they differ from gums. They are more or less acted upon by the alkalies. The most important are Rosin, Mastich, Sandarach, Elemi, Tacamahac, Animi, Labdanum, Copal, and Lac, which are described under their respective heads. [GUMS.]

RESPONDENTIA is a contract by which money is raised on the chance of the safe arrival of a ship's cargo, in the same manner as on the safe arrival of the vessel, in Bottomry. It is to be used in the same emergencies, and gives the creditor the same recourse against the borrower. There is no hypothec over the cargo, as there is over the vessel in the case of Bottomry, and hence the security is merely personal. [BOTTOMRY.]

REST, a term sometimes used in Banking to denote the undivided profits remaining at the period of balancing. It also expresses the period of balancing.

REVENUE AND EXPENDITURE, PUBLIC. The public revenue in this country, as in most other parts of Europe, originally consisted of the rents of crown lands, and of sums levied from the subject simply by the exercise of the royal prerogative. After the Conquest, the practice was introduced of the barons and military tenants of the crown, assembled in "Great Council," making grants in pressing emergencies, which were raised by taxes; and this practice was extended when representatives of the commons were admitted to parliament in the 13th century; more especially after the crown estates became reduced by alienations. But still, down to the end of the reign of Elizabeth, by far the larger portion of the revenues was derived from sources over which parliament retained no control. Thus, the duties of tonnage and poundage [CUSTOMS] were usually conferred upon each sovereign at his accession for life. And, from these and other sources equally permanent and independent, Elizabeth, although the grants to her averaged not more than £70,000 a-year, enjoyed a revenue of about £500,000; which was also expended without any check from either house.

Nearly the same system was continued under James I. But a change took place in the reign of Charles I., whose lofty opinion of the prerogative led him, though refused the duties of tonnage and poundage at his accession, to levy these, a new tax called ship-money, and other exactions, without the sanction of the legislature. The differences between the king and parliament ended in a rupture in 1641, before which the public revenue amounted to nearly £900,000. A period of transition then occurred from the ancient to the modern system. During the Commonwealth, the excise and post-office were established, and other financial innovations introduced; most of which were continued after the restoration of Charles II., in whose reign stamp-duties were first levied. A return was made to absolute principles during the last years of Charles; and still more after the accession of James II. But an entire revolution took place on the abdication of the latter, and the succession of William and Mary in 1688, when the exaction of money from the subject by the exercise of the prerogative ceased; and all taxes were afterwards imposed by the authority of parliament. The customs, or the duties upon exports and imports, and the excise-duties—those upon the manufacture or consumption of commodities—now became the great sources of the public revenue. Considerable additions to these branches were made during King William's reign; and the system of borrowing and funding money was introduced. In 1701, the year preceding his death, the revenue amounted to £3,895,205; of which the customs produced £1,539,100; the excise, £986,004; and the land-tax, of 2s. per pound, £989,965. The total amount raised by taxes and loans during his reign (1689-1702), of which 9 were years of war, was about £72,000,000.

In the 12⅓ years of Anne (1702-1714), of which 11 were years of war, the total revenue raised by taxation was about £62,000,000, and by loans nearly £60,000,000. In the 13 years' reign of George I. (1714-1727), the amount raised by taxes was £77,000,000, and by loans nearly £3,000,000; but again £5,000,000 of debt were paid off. In 1727, when this king died, the produce of the taxes was £6,762,643; of which the customs yielded £1,530,361; the excise, £1,927,354; and the land-tax, at 4s. a-pound, £2,000,000. In the 33 years' reign of George II. (1727-1760), of which 15 were years of war, the amount raised by taxes was £217,000,000, and by loans about £60,000,000. In the latter part of this reign the revenue increased considerably, principally through the extension of the excise system; and in 1759 it amounted to £8,523,540; of which £1,985,376 were derived from customs, and £3,887,349 from the excise.

The 59 years' reign of George III. (1760-1820), which witnessed so wonderful an augmentation both of the general wealth and of the government expenditure, commenced with a revenue from taxation of only £8,800,000. Nor, at the commencement of the American war, 1779, was it much beyond £10,000,000. At the peace of Versailles, 1783, it was nearly £12,000,000. In the 10 years of peace that followed, it made a very considerable advance, having, in 1793, when the war with France broke out, risen to nearly £20,000,000. But the extraordinary increase began from 1797, the year of the suspension of cash payments by the bank, when the produce was about £23,000,000. In 1798, the year following, it rose to £31,000,000; and it went on regularly advancing till 1815, the last year of the war, when the amount of revenue, the produce of taxation, paid into the Exchequer, reached, after paying the expenses of collection, the enormous sum of £72,210,512. The loans raised in this eventful period were also on a gigantic scale: the amount derived from this source, including Exchequer bills, beyond the amount redeemed, in the 23 years from 1793 to 1815 inclusive, having been £432,707,263; and the aggregate amount of revenue and loans, raised for public uses in the same period, £1,498,461,819. The expenditure, including interest upon the debt, during the 10 years from 1806 to 1815 inclusive, averaged £84,067,761 per annum. In 1814, the current expenditure amounted to £76,780,895; and the interest upon the debt to £30,051,365, making together, £106,832,260, the largest annual outlay ever made; though that of the previous year, 1813, was £105,943,727, and of the year subsequent, 1815, £92,280,180. Nothing at all approaching to these financial operations occurs in the history of the world. (*Porter's Progress of the Nation*, § 4, c. 2).

A considerable reduction of taxation took place after the return of peace. In 1816, the reductions amounted to £17,547,365; mainly consisting of the property-tax, £14,318,573, and the war malt-duty, £2,792,000. Some addition was made to the taxes in 1819. But important abatements were again made in 1822, and still more in 1823, when the salt-duty and assessed taxes were reduced to the extent of £4,185,735. In 1824 and 1825, the customs on coals, silk, wine, tobacco, coffee, and a variety of other articles, were abated, and the remainder of the excise on salt; the whole amounting to £5,500,000. In 1826, the duties on British spirits and other articles were reduced not less than £1,967,215. In 1830, the beer-duty was repealed, £3,055,000; also duties on sugar, hides, and skins. In 1831, the customs on sea-borne coals, printed cottons, and other articles, £1,588,052. In 1832, the excise on candles, £476,500; in 1833, the soap-duty and various assessed taxes, £1,500,000; in 1834, the duties on windows, Irish spirits, &c., £2,064,516; and in 1836, duties on paper, spirit licenses, &c., amounting to £1,021,786. No other important abatement took place until the introduction of the uniform penny postage in 1840; in which year, however, the loss of income from this source, and the increased expenditure consequent on the military operations in Canada, China, and elsewhere, led to the addition (with certain exceptions) of 5 per cent. to the customs and excise duties, and of 10 per cent. on the assessed taxes. The total amount of taxes repealed, expired, or reduced, in the 27 years from 1815 to 1841 inclusive, was about £45,000,000; and of taxes imposed, £8,000,000; the excess of the former above the latter being thus £37,000,000.

The following table shows the revenue and expenditure (including charges of collection), the difference between them, and the taxes imposed and reduced in each of the 20 years to 1841; to which is added, for comparison, the average price of wheat according to the London Gazette, and the declared value of the exports of the produce and manufactures of the United Kingdom.

Year.	Revenue.	Expenditure.	Excess of		Taxes		Wheat per Qr.		Value of Exports.
			Revenue.	Expenditure.	Imposed.	Repealed.			
	£	£	£	£	£	£	s.	d.	£
1822	59,823,724	55,079,316	4,744,408	....	....	2,139,101	43	3	36,968,964
1823	58,498,157	54,197,411	4,300,746	....	18,596	4,185,735	51	9	35,458,048
1824	59,829,691	55,941,519	3,888,172	....	49,605	1,801,333	62	0	40,396,300
1825	57,945,105	54,895,949	3,049,156	....	48,100	3,676,239	66	6	38,877,388
1826	55,628,793	56,274,712	....	645,919	188,725	1,967,215	56	11	31,536,723
1827	55,510,145	56,336,819	....	826,674	21,402	84,038	56	9	37,181,335
1828	57,391,235	54,144,241	3,246,994	....	1,966	51,998	60	5	36,812,756
1829	55,934,963	54,223,412	1,711,551	....	....	126,406	66	3	35,842,623
1830	54,932,290	52,018,617	2,913,673	....	696,004	4,093,955	64	3	38,271,597
1831	51,012,608	51,711,465	....	698,857	627,586	1,623,536	66	4	37,164,372
1832	51,523,087	50,908,328	614,759	....	44,526	747,264	58	8	36,450,594
1833	50,679,397	49,166,314	1,513,083	....	....	1,526,914	52	11	39,667,347
1834	50,831,271	49,223,116	1,608,155	....	198,394	2,064,516	46	2	41,649,191
1835	50,408,579	48,787,638	1,620,941	....	5,575	165,877	39	4	47,372,270
1836	52,949,397	50,819,305	2,130,092	....	4,521	1,021,786	48	6	53,368,571
1837	50,663,353	51,319,113	....	655,760	100	234	55	10	42,070,744
1838	51,375,520	51,720,748	....	345,228	1,733	289	64	7	50,060,970
1839	51,927,495	53,440,287	....	1,512,792	....	63,258	70	9	53,233,580
1840	51,850,083	53,444,053	....	1,593,970	2,155,673	1,218,959	66	4	51,406,430
1841	52,363,949	54,465,318	....	2,101,369	....	27,170	64	3	51,634,623

The deficiency for 1842 was computed by Sir Robert Peel, in March of that year, at £2,570,000; to meet which he proposed a tax of 7d. per £1 on all incomes in Britain exceeding £150, estimated to produce £3,700,000; the raising of the Irish stamp and spirit duties to the same rates as those of Britain, reckoned to bring £410,000; and an export duty on coals £200,000; total, £4,310,000; affording a surplus of £1,740,000, to be applied to a reduction of the timber duties and others, and to meet the expense of military operations in China and elsewhere. This plan, after a modification of the proposed duty on coals, was sanctioned by parliament.

THE BUDGET, or annual exposition of the finances submitted to the House of Commons by the Chancellor of Exchequer, does not exhibit an articulate account of the revenue and expenditure, but merely a statement of the sums required to be voted for the public service, under the different heads of Navy, Army, Ordnance, and Miscellaneous Articles, together with any incidental charges which may apply to the year, with the *ways and means* for meeting the same,—comprehending the surplus of the Consolidated Fund, after defraying the charges upon it, the annual duties, and such incidental receipts as come in aid of the national resources.

The Consolidated Fund,[*] formed by Mr Pitt in 1786, at present embraces all the branches of the revenue except the annual sugar-duty. It is specially burdened with the interest and other payments on account of the national debt, the civil list, pensions, and other permanent grants by parliament. The surplus is always considerable; of late years about £14,000,000.

The Annual Duties comprehended formerly the malt and land tax, which, on constitutional principles, were reserved for special annual grants, as a restraint on the power of the crown. On the land-tax being rendered perpetual in 1798 [LAND-TAX], certain duties on sugar and tobacco, and on offices, pensions, and salaries, were substituted in its place. Of late years, however, the only tax reserved for an annual grant is the sugar-duty, estimated usually at £3,000,000.

The application of the supplies of each session is regulated by the *Appropriation Act* (introduced as a restraint on the improvidence of Charles II.), which is passed after all the grants have been made, and usually indeed contains, along with the appropriation clauses, the authority for making the last payments out of the Exchequer.

In the event of the revenue proving insufficient for the expenditure, the deficiency is temporarily supplied by means of exchequer bills; which are also issued in anticipation of the growing duties. [FUNDS. SUPPLIES. UNITED KINGDOM.]

REVERSIONS. [ANNUITY. INSURANCE ON LIVES. INTEREST, COMPOUND.]

RHATANY ROOT, derived from the *Krameria triandra*, consists of cylindrical ramifications, varying in size from that of a quill to a finger. It is imported from Peru, and is used as an astringent medicine.

RHODIUM, a rare and extremely hard and durable metal, obtained by Dr Wollaston from platinum ore. Sp. gr. 11. Its scarcity is said to be the only bar to its extensive employment in the arts, as it forms valuable alloys with other metals, particularly steel.

RHUBARB (Fr. *Rhubarbe*. Ger. *Rhabarber*. It. *Reobarbaro*. Por. *Ruibarbo*. Rus. *Rewen*. Chin. *Ta-hwang*), a medicinal root obtained from a plant (*Rheum palmatum?*) which inhabits the lofty mountains of Central Asia. Three kinds of it are distinguished—namely, Russian, Turkey, and Chinese or East Indian. The Russian rhubarb is the best, as very great attention, both in purchasing it at Kiachta from the Bucharians, and in transporting it from thence to Moscow and Petersburg, is paid by order of government, and the bad pieces are burned by an inspecting apothecary. It possesses a fine bright reddish or whitish yellow colour, and a strong fragrant smell; and is commonly in round pieces, often perforated with so large a hole that many have the appearance of a mere rind. Turkey rhubarb is derived from the same source as the Russian, but is generally darker and coarser, from less attention being paid to the trade. The Chinese or East Indian is heavier, harder, and more compact than the others; seldom perforated with holes, and is either in long pieces or with two flat sides, as if they had been compressed. The rhubarb imported into this country, with the exception of a small quantity from Russia, is derived almost exclusively from China. Nearly 50,000 lbs. are annually entered for home consumption.

HYBRID RHUBARB (*Rheum hybridum*) is a well-known plant, extensively cultivated in this country for its large succulent stalks, used in confectionary.

RIBAND (Fr. *Ruben de Soie*. Ger. *Band*. It. *Nastro di Seta*. Sp. *Cinta de Seda*), a name given to silken bands of various widths and colours, much used by females for headdresses and other purposes. They are both plain and figured, and are sometimes distinguished into sarcenet, satin, &c., according to the manner in which they are made. They are also frequently ornamented by having what is called a *pearl edge* given to them. Ribands are woven in pieces, each 36 yards in length. The finest are made entirely of Italian silk; the next in quality of a mixture of Italian and Bengal silk; and the commoner sorts altogether of Bengal silk. The great seat of the manufacture of ribands is Coventry, where they are now made of quality equal to the finest of the productions of the Lyonese weavers: they are also made at Congleton, Derby, Macclesfield, Leek, and other places. [SILK MANUFACTURE.]

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[*] In the early part of the funding system a separate account was kept of each loan, and of the tax imposed for payment of the interest. The inconvenience and confusion of this method led to the appropriation of the various branches of revenue into three funds;—the *Aggregate Fund*, 1715; and the *South Sea* and *General Funds*, 1716,—each chargeable with the payment of certain annuities then due by the public. And in 1786 these were formed into one fund, thence termed the *Consolidated Fund*.

RICE (Du. *Ryst*. Fr. *Riz*. Ger. *Reiss*. It. *Miso*. Por. & Sp. *Arroz*), an esculent grain, the produce of a panicled grass (*Oryza sativa*), which resembles common barley. Although less nutritious than any of the cerealia, it forms the chief object of culture in China and the East Indies. And it has been introduced into Carolina, Georgia, the West Indies, and several parts of Central and South America. In Europe its cultivation is confined chiefly to Lombardy, Valencia, and some other districts adjoining the Mediterranean.

Rice requires not only an intense heat, but also moisture so abundant, that the field on which it grows must be repeatedly laid under water. Indeed, without its due degree of moisture, rice proves almost wholly unproductive; and hence the dreadful famines which sometimes occur in different parts of India, where it forms the sole dependence of the population. Rice is of course an article of extensive commerce in India and China; and since the reduction of duty in 1828, a considerable increase has taken place in its consumption in this country, more particularly at times when corn is dear. It is imported in two states,—cleaned of the husk, and in the rough state called paddee; the former is brought from India and Java, the latter from the United States. Of late years an increased quantity of paddee has been imported in comparison with cleaned rice; there being less waste in the transport of the former, and its cost less; while, by the superior machinery employed in Britain, the husk is removed with less injury to the grain than in the country of production. The import of paddee from America has been further encouraged by the discriminating duty charged on foreign cleaned rice.

The following extract from the London Price Current of October 1842, affords a comparative view of the estimation in which the different kinds introduced into the British market are held:—

Rice in bond,—Carolina, per cwt., 21s. to 25s.: East India, fine Patna, 0s. to 0s.: Bengal white, 11s. to 12s. 6d.: Cargo, 8s. 6d. to 10s.: Java, 7s. 6d. to 11s. 9d.: Madras, 8s. to 10s.

The bag of East India rice contains about 1¼ cwt.; the American cask, 6 cwts.

On the exportation of foreign rice that has been cleaned in this country, a drawback per cwt. is allowed, equivalent to the duty paid on 4 bushels of paddee.

RICE PAPER is said to be a membrane of the *Artocarpus incisa*, or bread-fruit tree. It is brought from China in small dyed pieces, and is used in the manufacture of several fancy and ornamental articles.

RIXDOLLAR. [GERMANY.]

ROAD, an artificial line of communication between two places, made by levelling and hardening the surface of the ground, to facilitate transit thereon. The extent and quality of the roads in a country may be safely held to mark the degree of its wealth and civilisation, and generally are to be regarded as a prominent feature of national economy. Such were the Roman roads which connected the most distant parts of the empire with the capital, and of which many traces still remain in this country as well as on the Continent. The modern roads, previous to the beginning of last century, were little adapted for ordinary use by wheel-carriages. Throughout the United Kingdom, generally, commodities were transported upon pack-horses, which, like the mules in Spain, were trained to follow each other in long succession on the rough, narrow, and often scarcely passable causeways or tracks; and the common mode of travelling for passengers was in like manner on horseback. In the beginning of the 18th century, road-making became a subject of greater attention. And, after 1760, the general spirit of improvement which characterized that period led to the formation of carriage-roads in all the great thoroughfares; no fewer than 452 turnpike acts having been passed in the course of fourteen years. Since then the same system has been progressively extended; and carriage-roads are now established through every parish of the kingdom. Many of these must be pronounced highly defective in construction when compared with the modern formations of Macadam and Telford; but, taken as a whole, they are unequalled in any other country; and, in connexion with our canals and railways, constitute that wonderful system of internal communication,—that *viabilité immense*, as designated by the French,—for which Great Britain is the admiration of the world.

In the laying down of roads no acclivity should, according to Mr Telford, if practicable, exceed 1 foot in 35, so that no difficulty may be presented to fast driving either in ascending or descending; and modern engineers consider it unadvisable in any case to exceed 1 in 24; though there are acclivities twice as steep in some turnpike roads. A road should also be of a regular uniform width, and be properly fenced. When likely to be much used by heavy carriages, it should have a regular foundation of large stones; over which a coating, about 6 inches deep, of small broken stones, should be laid, so as to present a surface, uniform, smooth, and convex. It is also of importance that a road should be raised above the level of the surrounding ground, have proper drains, and an exposure to sun and wind, so as to produce rapid evaporation of moisture.

In England, according to Blackstone, every parish is bound at common law to keep the roads that intersect it in good condition; and by the 2 & 3 Philip and Mary, c. 8, the parishioners were obliged, according to their ability, to provide labour and implements for four days' work upon the roads annually. This rude plan of forced or *statute labour* (then common in Europe) was improved by other acts; but in course of time it was gradually superseded on all the great thoroughfares by the turnpike system; and it was also abandoned for other highways in 1835, when the laws relating to cross or parish roads were consolidated by the act 5 & 6 Wm. IV. c. 50. This act authorizes a surveyor, elected annually by the vestry, to levy a rate on the parish, on the basis of the poor assessment; the rate-payers, however, being empowered, if a majority see fit, to divide among themselves the carriage of the materials required for the roads. A number of parishes may unite and appoint a surveyor; and in parishes having more than 5000 inhabitants, a highway board may be established.

The English turnpike system, or plan of raising a revenue for the construction and repair of roads by imposing tolls at gates or *turnpikes*, though introduced by the 26 Ch. II. c. 1, was not established to any extent until after 1763. Under this system, the road is placed, according to its length, under the management of one or more sets of trustees, who are appointed by statute, and generally consist of the landed proprietors and principal farmers and tradesmen in the vicinity. All details are committed to surveyors appointed by them; and the trustees, being empowered to contract loans on the security of their revenues, are enabled very speedily to complete any undertaking. In 1839, the number of turnpike trusts in England and Wales (including consolidations) was 1116; their revenue, £1,532,956; and the amount of loans for which the tolls were mortgaged, £7,238,935, which was exclusive of £1,194,699 of arrears of interest, and the amount of the floating debts.

From a summary in 1841 by Mr Tidd Pratt, of 16,965 returns, made pursuant to the act 2 & 3 Vict. c. 40, by surveyors of parishes, townships, or places which repair their own highways (168 returns, however, being deficient for England and 125 for Wales), it appears that in 1839 the length of turnpikes was 19,666 miles; of streets or roads repaired under local acts, 2869 miles; and of all other highways, 96,992 miles; making of highways for wheeled carriages in England and Wales, 119,527 miles. The amount of rates levied in 1839 (exclusive of turnpike dues), was £1,312,812; and the average expenditure in the repair of the highways (exclusive of turnpikes and roads and streets under local acts), was £12, 18s. 5d. per mile, and in law and other expenses 3s. per mile. According to other returns, the average annual expenditure in the 5 years ended 1839, on 22,000 miles of turnpikes and roads under local acts, was nearly £51 per mile; whereof—£36 on mere repairs; £9 on improvements; and £6 on management.

In Scotland, the ancient system was that of the statute or compulsory labour of the inhabitants for 3 days before and 3 days after harvest; and the act 5 Geo. I. c. 30, provided that, in the event of this proving insufficient, an assessment, not exceeding ½ per cent. on the *valued rent*, might be imposed on landed property. After 1750, this plan was superseded as to the great thoroughfares by the turnpike system, as in England. It has also been greatly modified in other respects; most of the counties having obtained local acts commuting the statute labour for a fixed money payment, and authorizing assessments on landed property, varying in each county according to circumstances. By these acts the road-administration is vested in trustees, embracing the sheriffs depute and substitute, the provost and two eldest bailies of each royal burgh in the county, all justices of peace, owners of estates worth £100 Scots a-year and upwards of valued rent, and their eldest sons, and one guardian or trustee of all minors possessing such amount of property. The county is divided into districts, each placed under the resident trustees and surveyors appointed by them; and the district meeting prepares annually a state and estimate for the general meeting, which has power to order an assessment on the occupiers of land, and which in other respects directs and controls the district meetings. Sufficient powers are given to the trustees for obtaining land and materials for the roads and bridges.

But in the northern counties a different system of supervision prevails under the "Commissioners of Highland Roads and Bridges," appointed by government in 1803 with the view of stimulating improvement in these districts. They are authorized to decide upon the roads proper to be constructed, and to superintend their execution; the expense being defrayed by government and the proprietors jointly, each one-half. This measure has been highly successful; and about 900 miles of excellent roads, and upwards of 1100 bridges, have been constructed in this way. The old military roads formed by General Wade (1720-1730) were placed under the management of the commissioners in 1814; and about 300 miles of them are still kept up.

We possess no statistics of the ordinary county roads of Scotland; nor of the turnpikes later than 1829, when their length was 3666 miles; the number of trusts, 190; the amount of their debts, £1,495,062; and income, £187,584.

In Ireland, the statute labour system was abolished in 1763, when the road administration was vested in the grand juries. Mail-coach roads are determined upon by the postmaster-general, and their expense defrayed by a tax on the county. The supplies for other roads are raised by a tax on each barony for the portion within its boundaries. Since 1831, also, a considerable extent of road has been constructed at the public expense, under the board of public works, constituted by the act 1 & 2 Wm. IV. c. 33.

Of the roads in the United Kingdom, the best is usually stated to be that between London and Holyhead, constructed, under the superintendence of parliamentary commissioners, by Mr Telford; but, in general, the English roads are greatly inferior to those of Scotland, more especially the turnpikes and those formed by the Highland Commissioners, which, notwithstanding the rugged nature of the country, have mostly moderate acclivities, and are indeed in every respect models of the manner in which the difficulties presented by a mountainous country may be successfully overcome. This superiority in the northern roads is stated by Sir Henry Parnell to arise "in consequence of the excellent materials which abound in all parts of

Scotland, and of the greater skill and science of Scotch trustees and surveyors" (*Treatise on Roads*, p. 313). Much is also due to the superiority of the Scottish county management over the English parish system. The Irish roads are likewise, generally speaking, well laid out and in good repair. Indeed, both Ireland and Scotland possess natural advantages as to material for road-making to which England cannot lay claim, more especially the district between the Tees and the Trent, where the formation is chiefly coal, sandstone, and soft limestone.

ROMAN or PAPAL STATES, stretch across the central part of the Italian peninsula in an oblique direction, from the Adriatic to the Mediterranean, and between Tuscany, Modena, and Lombardy, on the N. W., and Naples on the S. E. Area, 17,822 sq. miles. Population in 1833, 2,742,000. Capital, Rome; pop. 153,000. Government, an elective monarchy, the pope for the time being the absolute sovereign, with a consulting assembly of cardinals.

The papal territory is divided into two unequal portions, mostly level, by the Apennines, which traverse the country from N. W. to S. E. The most extensive is the western portion, which contains the city of Rome and the Tiber; but a great part of it is waste and pestilential, particularly the Campagna di Roma and the Pontine Marshes. The eastern portion, especially Bologna and the March of Ancona, is more fertile and better cultivated; producing wheat, maize, rice, hemp, and tobacco. The elevated districts supply timber, fruits, and even silk, wine, and oil, but of a quality inferior to those of the Tuscan and Neapolitan territories. The manufacturing industry is mostly confined to coarse woollen cloths, for the internal consumption. There are, however, silk establishments at Rome and Bologna; iron-works at Bracciano, Canino, Conca, and other places, for which iron-ore is brought from Elba; and glass-works, and manufactories of paper, soap, hats, liquorice, wax-candles, and catgut in several towns. But all the productive industry of the country, and especially agriculture, is in a state of backwardness, from the poverty and ignorance of the people, the perpetual intervention of the ecclesiastical authority, as well as heavy taxes and ill-directed legislation.

The provinces on each side of the Apennines having little communication with each other, some are exporting while others are importing the same kinds of produce. A surplus of corn generally exists in the N. provinces, while in the S. there is a deficiency. Again, olive-oil is exported from the S., while in the N. about 3,000,000 lbs. are annually brought from S. Italy and Tuscany. The chief commercial relations are with Naples, Tuscany, Lombardy, and Great Britain. The exports to England, according to Dr Bowring (*Report*, p. 61), consist mainly of grain, hemp, rags, sulphur, silk, tartar, wool, lamb and kid skins, and cork; and the imports from it of colonial produce and spices, cod, pilchards and herrings (largely consumed in Lent and other fasts), drugs and dye-stuffs, lead, copper, steel, tin-plates, cotton twist, piece goods of all sorts, hardware, and iron and steel goods, jewellery, earthenware, porcelain, isinglass, coal, whale-oil, and ivory. British vessels load at Civita Vecchia; but the above-mentioned articles are chiefly shipped to England from Leghorn, Genoa, and Marseilles. The vessels which land their cargoes of salt-fish, sugar, and coal, at Ancona, generally proceed to Messina or other ports for return cargoes. The total imports from all countries are estimated at £1,458,000, and the exports at £1,042,000.

Ports.—*Ancona*, on the Adriatic, lat. 43° 38′ N., long. 13° 35′ E.; pop. 30,000. It is a free port, and the harbour is good,—indeed the best on the coast from Venice to Manfredonia. Exports, corn, silk, wool, wax, hemp, rags, &c. In 1838, 1292 vessels, burden 66,828 tons, cleared with cargoes valued at 1,109,300 scudi.

Civita Vecchia, the only good port on the W. coast, lies in lat. 42° 5′ N., long. 11° 44′ E., 36 miles N. W. of Rome. Pop. 8000. The harbour is from 14 to 18 feet deep; and there are docks and a lazaretto: 1520 vessels, burden 133,402 tons, cleared in 1837.

MEASURES AND WEIGHTS, MONEY, FINANCES, &c.

Measures and Weights.—The foot = 11·72 Imp. inches; the mercantile canna of 8 palmi = 78·35 Imp. inches; the builders' canna of 10 palmi = 87·96 Imp. inches. The mile = 1628 Imp. yards, or 7⅜ furlongs.

The tavola censuale = 1000 sq. metres = 1196 sq. yards: the rubbio = 18·484 tavole.

The wine barile of 32 boccali or 128 fogliette = 12·84 Imp. gallons; and 16 barili = 1 botte: the soma of oil of 80 boccali = 36·14 Imp. gallons; and the oil barile is 28 boccali, or 12·65 Imp. gallons.

The rubbio of corn of 4 quarte, 22 scorzi, or 88 quartucci, = 8·10 Imp. bushels.

The pound of 12 once, 288 denari, or 6912 grani, = 5234 troy grains; and the quintal of 10 decine, or 100 lbs., = 74·77 lbs. avoirdupois. The apothecaries' pound, and that used for gold and silver, are of the same weight as the commercial pound.

In Ancona the braccio = 25·33 Imp. inches; the wine soma of 2 barili or 24 boccali = 18·90 Imp. gallons; the rubbio of corn of 8 coppe = 7·87 Imp. bushels; and 100 Ancona lbs. = 73·75 lbs. avoirdupois.

Money.—Accounts are stated in scudi (crowns or dollars), divided into 10 paoli, or 100 bajocchi. The value of the scudo is 4s. 2d. sterling,—the par of exchange with London being estimated at 48 paoli or pauls per £1. The paolo is thus worth 5d., and the bajoccho ½d. sterling.

Bankers' accounts are kept in pauls.

The principal coins are the gold doppia or pistole, worth about 32 pauls; the silver scudo, half-scudo, and pieces for ½, 1, 2, and 3 pauls; also in base silver, pieces for 2, 4, 7½, and 15 bajocchi,—the two last being termed single and double carlini; and in copper, bajocchi, halves, and quarters. The old louis-d'or is current at Rome for 44 pauls, the napoleon for 37 pauls, and the Spanish dollar for 10 pauls.

The notes or *cédole* for 5, 10, 20, 25, and 100 scudi, issued by the *Banco dello Spirito Santo*, and *Monte di Pietà*, are employed in the payment of sums exceeding 5 scudi.

Bills on London are commonly drawn at 90 days' date. No days of grace.

Revenue in 1835, 8,812,961 scudi, chiefly from land-taxes, customs, lotteries, and government monopolies of salt, tobacco, alum, vitriol, &c.: Expenditure, 9,429,799 scudi, including 2,547,555 on account of the national debt.

ROOD, the one-fourth of an acre; also a term applied by artificers to 36 square yards of stone, brick, or slate work.

ROPE, a larger kind of cordage, generally formed by a combination of vegetable fibres. Except for ship-cables, for which iron-chain is now much used, hemp is the substance principally employed in this country in the manufacture of rope, though it is occasionally made of Indian jute and coir. Of late years, hemp mixed with caoutchouc has attracted some attention; likewise cordage made of wire.

A hempen cable of 12 inches girth, and length 120 fathoms, weighs 3075 lbs. And as the weights of two cables of equal lengths will be as their sections, or squares of the girths, we have the following rule for the weight:—Multiply the square of the girth in inches by 21 (more accurately 21·3), the product is the weight in lbs. Also, as the breaking strain will be as the section, it will be as the weight, and will be found nearly by dividing the weight in lbs. by 100; the quotient is the breaking strain in tons. This rule is of course liable to uncertainty from the quality of the cable.

ROSE, a well-known flower (*Rosa*), from the petals of which rose-water is distilled, and a butyraceous oil or perfume called *Attar* or *Otto of Roses*, largely manufactured in India, Persia, and Turkey. The latter is a very costly article; 20,000 lbs. of rose leaves being required, according to Bishop Heber, to yield attar equal in weight to a rupee; and it is often adulterated with oil of sandal-wood, and the crystalline appearance of the genuine article imitated by the addition of spermaceti. The real attar congeals with a slight cold, floats in water, and dissolves in highly rectified spirits of wine. It is seldom imported from India for sale; but considerable quantities are brought from Turkey. The English oil is of a very inferior odour, and apt to become rancid.

ROSEWOOD (Por. *Pao de rosado*. Sp. *Leno de rosa*), a beautiful fancy-wood produced by a large tree found in Brazil, India, and the Canaries. It should be chosen in large pieces, of irregular knotty grain, well filled with resinous fibres, sound, and heavy. It is of a reddish colour; has an agreeable odour; and is esteemed according to the degree in which the darker parts are distinct from the purple red, which forms the ground. Rosewood is used for cabinet-work, either solid or cut into veneers, nine to an inch; and, next to mahogany, is now the wood most in use for such work. About 1600 tons are annually imported, chiefly from Brazil.

ROSIN, a commercial name for the residuum of the distillation of turpentine: it is a light, hard, brittle, inflammable substance, transparent, and of a dark colour. There are several kinds,—as black or common, and amber rosin. It is made at Hull, London, and other ports communicating with the Baltic states; and is used in the manufacture of soap, varnishes, and other articles.

ROTTENSTONE, a kind of clay of a dirty gray or reddish-brown colour, passing into black: it is dull, earthy, soft, meagre to the touch, and emits an unpleasant odour when rubbed. Localities,—Bakewell in Derbyshire, Wales, and Albany near New York. It is used in polishing metals.

RUBLE. [Russia.]

RUBY, a name applied by lapidaries to two kinds of precious stones essentially different. The Oriental ruby, next to the diamond the most valuable of gems, is properly a red sapphire. The other rubies are different varieties of spinel.

RUM is a spirit procured by distilling a fermented fluid prepared from the refuse in the operation for making sugar; the peculiar flavour being derived from an essential oil existing in the juice of the cane, which is brought off by the spirit. The product of the distillation is colourless; but is afterwards coloured by the addition of a little burned sugar. The best is made from molasses [Sugar]; and it is preferred when well kept and of good age, considerable body, smooth oily taste, and of a brownish transparent colour. When of a fiery taste and limpid colour it is either too new or adulterated, as it often is, especially by retail dealers, either with corn spirit or home-made molasses spirit; which last, from similarity of taste, is not readily known from the genuine liquor.

The West India Islands and Guiana are the countries chiefly distinguished for the produce of rum, more especially the British possessions. The best is that of Jamaica, the produce of which is likewise highest in quality; what in trade is called "Leeward Island rum" is inferior to it, though still good. The quantity annually produced depends generally upon the nature of the season; but the change occasioned by the abolition of negro slavery has of late years led to a gradual decline in the shipment of rum, as well as of the other West India staples. In the three years ending 1831, the average importation into the United Kingdom from the West Indies (including Guiana) was 7,180,000 gallons; but in the three years ending 1841, the average was reduced to 3,524,320 gallons,—the importation in 1841 being indeed only 2,770,161 gallons. [West Indies.]

The imports from the West Indies, after supplying the United Kingdom, have generally left a considerable surplus, especially of the inferior kinds, usually sent to the other colonies, Germany, and elsewhere; and there is still a re-exportation, notwithstanding the diminished production of the West Indies: the consumption of this country having also declined, until in 1841 the quantity (exclusive of that used for marine stores) was only 2,300,000 gallons; being below the amount at the beginning of the century, which was upwards of 3,000,000 gallons. This decline has been comparatively greatest in Ireland and Scotland, especially the former, where the consumption, though 860,000 gallons in 1800, has fallen to about 20,000, owing to the great rise of duty during the war, and the substitution of home-made spirits.

The importations of rum from other countries have until lately been nearly confined to small occasional parcels from the foreign West Indies and Brazil, none of which, owing to the discriminating duty in favour of our colonial produce, was entered for home consumption. In 1836, however, the duties on East and West India sugar were equalized, and the rule which confined the navy contracts to West India rum abolished. These measures were followed by importations of East India rum—in 1840 to the extent of 312,000 gallons. And this trade has been further stimulated by the equalization, in 1842, of the duties on East India and West India rum, by the reduction of the former to the colonial rate of 9s. 4d. per gallon. The admission of East India rum to the British market will probably lead to improvements in its quality, which at present is very low.

The rum supplied to the navy is furnished duty free, as also that required for stores by merchant ships. The annual amount thus delivered in the United Kingdom, on an average of the 14 years ending 1839, was—for the navy, 372,000 gallons; for ship stores, 315,000 gallons.

RUPEE. [INDIA.]

RUSSIA, an empire comprising the whole northern portion of the eastern hemisphere, from the frontiers of Prussia and the Gulf of Bothnia on the W. to the Pacific on the E.; also a large tract on the N. W. part of America; with numerous islands contiguous to these countries. The whole, exclusive of certain territories called *oblasts*, is divided into about 75 governments or viceroyalties. Area estimated at 7,700,000 sq. miles; and population at 62,000,000, of whom about 47,000,000 are contained in European Russia. Capital, St Petersburg. Government, an absolute monarchy.

This empire is divided into two great parts by the Ural Mountains, which on the N. separate Asiatic from European Russia. The former is generally a vast level region, declining imperceptibly towards the Arctic Ocean, and rising gently towards its southern border, where it is lost in the immense mountain-ranges which separate it from the Chinese empire and Tartary. The northern portion of this tract is mostly a frozen desert, but the southern is generally fertile. The whole of this region, however, as well as the American territory, being but thinly inhabited by barbarous tribes, possesses as yet little or no commercial interest; and we shall therefore principally confine our attention in the present article to the tract which lies to the W. of the Urals, embracing European Russia and the country between the Black Sea and the Caspian—the main body and seat of the wealth and power of the empire.

European Russia may also be considered as one vast plain. If the Ural Mountains on its eastern border, and a mountain-tract in the Crimea be excepted, there is in this immense region no part elevated more than 500 feet above its base, or 1100 feet above the sea-level. That great tract of low land which begins in Northern Germany, expands in Russia to its greatest breadth, exceeding 1200 miles; and the water-shed which divides the rivers that flow to the Baltic, Arctic Ocean, Black Sea, and Caspian, consists merely of a table-land, in the N. E. parts called the Uwalli and Valdai Hills, whose declivities form long and generally imperceptible slopes. The most fertile region traverses the central part north-eastward, from between 48° and 52° on the W. to between 53° and 56° N. lat. on the E.; and lies between 25° and 50° E. long. Farther north, the country is for the greater part covered with forests or bogs, until we arrive at the shores of the White Sea or Arctic Ocean, where it is mostly a swampy desert, particularly towards the N. E., between the Urals and the river Mezen, the region of the *tundras*. The fertility also decreases to the S. of the central region, especially where it lies contiguous to the *steppes* of Southern Russia and of the river Volga, which are vast plains, formed chiefly of sand, and destitute of wood, except here and there a stunted birch.

The Climate of Russia is much colder than that of other European countries in the same latitude; and the farther we proceed eastward the temperature becomes still lower, arising from the dreary uncultivated surface of the land, its distance from the ocean, and the vast regions traversed by the north and east winds. The summer heat of Russia, however, is in general greater than in other countries under the same parallels. The provinces which border on the Baltic and on the White Sea have a wet climate; and this feature extends to the elevated tract which borders the basin of the Volga, on the N. and W. Farther east the rain decreases in quantity; and the southern districts have a dry climate.

The vast Forests of Russia constitute one of its most remarkable features, and a principal source of wealth; the timber, tar, pitch, and ashes derived from them forming staple exports. They abound chiefly in the north, covering about three-fourths of its extent between 65° N. lat. and the Volga; the trees being pine, fir, larch, alder, and birch, with a few limes. The central provinces, between the middle course of the Volga and the Dnieper, have scarcely sufficient wood for their own consumption; but extensive forests, chiefly pine and fir, occur on the W. of this tract, especially on the swamps of Pinsk and Ratnor, and on the banks of the Niemen, whence, and by the Vistula, much of the produce of the district is conveyed to the Prussian ports of Memel and Dantzic, and in part by the Duna to Riga. To the east, also, of the central district there are extensive pine and fir forests in the governments of Perm and Viatka; and of oaks, limes, elms, and ash, in those of Kazan, Niznei-Novgorod, Pensa, and Saratov. The oak forests are chiefly on the Volga near Tcheborsar. The southern provinces are almost entirely without trees.

In Minerals Russia is rich. The chief mines are situated in the Ural and Altai Mountains, and those which occupy the vicinity of Nertschinsk in Siberia. In 1837, the produce of gold from the Ural and Siberian mines was about 470 poods, equal in value to nearly £1,000,000; that of silver, from the Altai and Siberian mountains, 3000 poods, £330,000; and the annual produce of platina, chiefly in the Urals, is about 140 poods. Copper is produced to the extent of 210,000 poods a-year, chiefly in Olonetz and the Ural and Altai ranges; lead, 40,000 poods; and iron, about 170,000 tons, chiefly in the Urals; also in the Altai, Caucasus, Valdai Hills, &c. Other metals and coal exist, but they are not worked. Salt is procured in the Urals, the Crimea, and other places, chiefly in the E. and S. provinces; but it is deficient in the Baltic provinces, where it is imported from England and Austria.

Agriculture is but in its first stage; yet the grain produced is much more than is required for the consumption. The S. Baltic countries, Poland, and the governments nearest to Moscow, have the greatest proportion of cultivated land. Rye, the most common grain, may be grown in all parts except the Arctic region and the steppes; it is produced in greatest quantity in the district between the cataracts of the Dnieper, in 48° N. lat. on the S. and the Volga on the N. The cultivation of barley extends to 67° N. lat. Oats are extensively cultivated in the districts through which the great roads and water-courses run; but they do not succeed N. of 62° N. lat. Wheat is a principal object of culture in the fertile tracts along the southern rivers, especially in the Ukraine (a country comprising Volhynia, Podolia, Kiev, and Poltava), and in Voronetz, Tambov, Pensa, and Simbirsk; the produce of which districts is largely conveyed to Odessa and Taganrog for exportation. Farther north wheat is less grown, though in some favoured spots it succeeds to 58° and even 59° N. lat. Millet is grown in the upper regions of the Don, Oka, and Diesna; and maize at the S. extremity of the empire.

Hemp and flax are produced more extensively in Russia than in any other country; both succeed up to 65° N. lat.; but the chief localities are those adjoining the upper course of the Volga, in the governments of Tver, Jaroslav, and Kostroma: they form, with linseed and hempseed, staple exports from the Baltic ports and Archangel. Tobacco is much cultivated in the Ukraine.

Of other rural products, the most important are black cattle (also principally in the Ukraine), the tallow and hides of which are extensively exported; and sheep, which are still more numerous, though the wool is in general of inferior quality. Horses and goats also abound; likewise hogs, the bristles of which are largely shipped from the northern ports; and in the regions adjoining the Arctic Ocean numerous wild animals are killed for their skins and fur. The rearing of bees is a principal occupation of some tribes, especially in Kazan and Oufa, and the wax produced is very considerable.

The Fisheries of most value are those of the rivers Volga and Ural, and of the Sea of Azof; but except some caviar and isinglass from the S. ports, scarcely any of their produce is sent to other countries.

Manufactures were called into premature existence by Peter the Great, and, under the influence of the protective system, they have risen to some consideration, especially of late years. The establishments in 1839, exclusive of mines, furnaces, and smelting-houses, were 6855 in number, employing 412,931 work-people; which, according to the official report, was an increase in three years of 840 manufactories, and of 50 per cent. on the workmen. Of these manufactories, 616 were for woollen goods; 227 silk; 467 cotton; 267 linen; and 486 metal wares: the rest consisted chiefly of tanneries, tallow melting-houses, candle and soap works. The chief seat of manufactures is Moscow and its government; and next, the governments of Vladimir, Niznei-Novgorod, Saratov, Petersburg, and Tula. The Russians excel in the manufacture of leather; and from their advantages in respect to raw material, their canvass, strong linens, cordage, felt, mats, potashes, soap, candles, caviar, and isinglass, are quite as good as those made elsewhere; but in almost all other branches their products cannot compete with those of Western Europe, more especially Britain, as to finish, durability, and cheapness; and their existence is therefore dependent upon the continuance of a restrictive or rather prohibitory system of import duties. The annual value of the Russian manufactures was estimated in 1837 at £23,000,000; and in 1841, at £30,000,000.

The Inland Trade is very extensive; and it is facilitated by the vast means of internal communication afforded by the Volga, Dwina, Niemen, Duna, Don, Neva, and their tributaries, which, from the level nature of the country, are nearly all navigable, especially those which rise northward of 55° N. lat. And this navigation has been improved by canals, by means of which the Volga is connected with the Neva and the Dwina, so that goods may be sent by water from St Petersburg or Archangel to Astracan and the Caspian. The Volga has also been united with the Don, which falls into the Sea of Azof; and the Pripet, a branch of the Dnieper, is joined to the Bug, an affluent of the Vistula, thus connecting the Black Sea and the Baltic. The frost interrupts this navigation during a considerable portion of the year; but again, it affords great facilities to land-carriage and travelling by means of sledges. There are few good roads, with the exception of that between Petersburg and Moscow, and some other principal lines. Moscow is the principal entrepôt of the inland trade. But a great portion of it is carried on by means of annual fairs,—the most remarkable of which is that of Niznei-Novgorod, the centre of the immense system of inland navigation we have just noticed, situated at the confluence of the Oka with the Volga. This fair, which begins June 29, is frequented by about 300,000 strangers, including many from Western Europe and even the frontiers of China; and in 1839, the value of the goods exposed was £7,250,000; while at twenty-one other principal fairs, the chief of which were those of Irbit, Romna, Charkov, Kursk, and Rostov, the amount exposed was £8,700,000.

The External Commerce of Russia is cramped by the prohibitory system of import-duties imposed for the protection of her home manufactures; it is further impeded by the small extent of her available seacoast, and by the obstructions to its navigation for a considerable period of the year by ice. Still, the wants of so vast a population render its amount in the aggregate very considerable. The principal branch of trade is that with Great Britain, chiefly through the northern ports; that with Italy and Turkey, through the southern ports, ranks next in importance; and there is also an active intercourse with the neighbouring Baltic states, the Netherlands, France, and the Hanse Towns; but (except with the United States and Cuba) there is little intercourse with more remote places. Besides her maritime commerce, however, Russia carries on a considerable trade by land across her European and Asiatic frontiers. In this way tea and other articles are procured from the Chinese, with whom an exchange of commodities takes place at Kiachta. In 1839, the total value of the exports from Russia was 330,000,000 rubles, or £14,780,000; and the shipping despatched (exclusive of coasters) amounted to 6582 vessels, 1,184,636 tons; of which only 1051 vessels, 165,990 tons, were Russian. Of the shipping entered, nearly two-thirds were in ballast, arising from the coarse and bulky nature of the exports compared with the imports.

The British trade took its rise in the reign of Elizabeth, shortly after the discovery (1554), by Richard Chancellor, of Archangel, the port to which it was long confined. Notwithstanding the existing restrictions, it is very extensive, though inconsiderable to what it might become under a system of free trade; no other countries in the globe being, naturally, better fitted to supply each other's wants. The annual amount of British produce and manufactures (according to the declared value in England) imported into Russia, on an average of the five years ending 1835, was £1,488,980; and on an average of the five years ending 1840, £1,765,900. About two-thirds of the whole consist of cotton-twist and yarn: the only other article of any consequence is woollen cloth (nearly £120,000); the remainder is chiefly made up of cottons, machinery, coals, hardware, iron and steel, salt, refined sugar, tin, woollen yarn, ale, and beer. Considerable quantities of indigo (about 1,000,000 lbs.), coffee, cochineal, shellac, logwood, pepper, pimento, raw cotton, quicksilver, rum, tea, wine, and other foreign and colonial products, are likewise supplied by Britain. The returns from Russia embrace all her staple products already described. In 1840, the principal quantities were—870,400 cwts. flax, tow, and codilla; 598,840 cwts. hemp; 1,115,041 cwts. tallow; 4,517,998 lbs. sheeps' wool; 1,476,761 lbs. bristles; 435,511 quarters wheat and oats; 14,441 cwts. hides; 32,288 cwts. skins; 284,160 ells and 3000 pieces linens; 2,567,316 bushels linseed; 12,233 lasts tar; besides timber, ashes, rhubarb, rapeseed, and other articles.

The Russian merchants are divided into three guilds or classes of different degree, to one of which every merchant must belong, according to the nature and extent of his trade, by holding an adequate annual license. And the privilege of trading is granted to foreigners not owing allegiance—1st, as *settled* merchants, styled *foreign guests;* and, 2d, as *travelling* merchants, making short residence. There is, besides, the body of petty dealers or trading peasants, divided into four classes of different degree, which are also regulated by annual licenses. The chief other classes are the boors, a kind of slave peasantry, who compose the bulk of the population; and the nobles. Of the latter, many are extensively engaged in manufactures, in which they employ their boors as workmen.

The produce in different parts of the country is bought up by travelling dealers, who prepare and transport it for sale to the seaports, frontier towns, and fairs; where in return they purchase supplies of foreign goods. In the trade with the Baltic ports these dealers lay in their stocks in the interior between October and March, and transport them to the ports during the spring and summer months for delivery, if previously contracted for, to the purchasers, or for chance sale for exportation. The foreign trade is chiefly carried on by wealthy merchants of foreign extraction, partly foreign subjects, including many Germans and British, settled at the seaport and frontier towns, and also at Moscow, whose connexions abroad enable them not only to pay ready money to the inland dealer for the produce they buy of him, but also to make advances thereon without interest at fixed contract prices, 6 or 8 months before delivery, besides granting long credits to the same parties, and other inland buyers in selling to them goods imported or received on consignment. (*Clark's Russia Trader's Assistant.*)

BALTIC PORTS.

St Petersburg, the magnificent capital of the empire, founded by Peter the Great in 1703, is situated in lat. 59° 56′ N., long. 30° 19′ E., on the banks and islands of the Neva, near its mouth, at the E. extremity of the Gulf of Finland. Pop. in 1839, 476,000. It excels all the other cities in manufactures and commerce, though its navigation is closed by frost generally from November until May. Above 12,000 barks annually arrive from the interior with articles for consumption and shipment. In 1839, the principal exports were—239,000 poods flax (not half the usual quantity, it may be remarked); 2,256,000 poods hemp; 3,700,000 poods tallow; 108,000 poods hides; 824,000 poods iron, mostly in bars; 184,000 pieces sailcloth, ravenducks, and flem; 5,000,000 archines diaper, drillings, and crash; 170,000 chetwerts wheat, rye, and oats; 75,000 poods bristles; 883,000 pieces lath-wood and battens; 89,000 poods sheeps' wool; 318,000 poods hempseed oil; 90,000 poods copper; 195,000 poods cordage; and 448,000 poods potash: the chief other articles were feathers, hair, isinglass, quills, rhubarb, calf-skins, furs, soap, and candles. In the same year the principal imports were—280,000 poods cotton wool; 500,000 poods cotton yarn; 1,260,000 poods sugar, almost all Havannah; 700,000 poods salt; madder, indigo, brimstone, alum, gum, manganese, ochre, quercitron, dye-woods, and other drugs and drysalteries; fruit, herrings, lead (300,000 poods), tin, zinc, olive-oil (170,000 poods); silk ribands and handkerchiefs, cambrics, muslins, and tulle; pepper, rum, tobacco (50,000 poods); champagne and other wines; woollen goods and camlets. And the total value of the exports was £6,050,000, and of the imports, £9,075,000; embracing together about two-thirds of the external commerce of the empire.

Cronstadt, the port of St Petersburg, likewise the principal station of the Russian navy, is situated in an island 22 miles distant, in lat. 59° 59′ N., long. 29° 46′ E. The mercantile port is safe, deep, and commodious. The channel, higher up, is available only for craft not drawing more than 8 or 9 feet. In 1838, the amount of shipping despatched from Cronstadt was 1314 vessels, 261,582 tons; of which 765 vessels, 173,292 tons, were to Britain; the rest chiefly to the Hanse Towns, Netherlands, Sweden, and Prussia.

Riga lies in lat. 56° 57′ N., long. 24° 6′ E., on the Duna, about 7 miles from its embouchure. The port is spacious; the river is also wide; but, having a bar, vessels drawing more than 12 or 13 feet have to load and unload the whole or a part of their cargoes at Bolderaa, on its outside. Pop. 60,000. The navigation is generally closed from December to May. In 1838, the value of the exports was £2,078,000; the chief articles being flax, 29,550 tons, £832,900; hemp, 14,600 tons, £354,000; linseed, 202,650 quarters, £342,000; grain, chiefly rye, 245,000 quarters, £235,000; timber and deals, £152,500. The imports, consisting principally of tropical produce, manufactures, and wine, are in value only about one-third that of the exports. In 1838, the amount of shipping despatched was 1348 vessels, 180,968 tons; of which 468 vessels, 77,220 tons, went to Britain; the rest principally to Denmark, Netherlands, and Sweden.

The chief other Baltic ports are Narva, Revel, Pernau, Libau, and Windau.

PORTS OF THE WHITE SEA.

Archangel lies on the Dwina, 30 miles from its mouth, in lat. 64° 32′ N., long. 40° 44′ E. Pop. 25,000. It was the only Russian port accessible to foreigners down to the foundation of Petersburg; after which it lost much of its importance, though it is still a place of considerable trade, from its position on the Dwina, a river which, besides its own lengthened course, is connected by canals both with the Volga and the Neva. Its navigation is generally open from the latter part of May to the middle of October. Exports, chiefly rye, oats, timber, flax, hemp, iron, mats, linseed, potash, tallow, tar, pitch, train-oil, furs, canvass, coarse linen, cordage, and hair. Imports, tropical produce, salt, woollens, cottons, hardware, and herrings. The exports vary considerably in amount according to the demand for corn. In 1838, the shipping despatched amounted to 73,700 tons, including 55,260 tons to Britain; the rest chiefly to the Netherlands and Sweden.

Onega, at the mouth of the river of that name, carries on a similar trade.

PORTS ON THE CASPIAN.

Astracan lies on a small island in the Volga, 30 miles from its embouchure, in lat. 46° 21′ N., long. 48° 5′ E. Pop. 30,000. It is the centre of the extensive fisheries carried on in the Volga and Caspian. The fish taken are chiefly sturgeon, carp, and seal, particularly the first; and above 30,000 barrels of caviar, prepared from sturgeon roes, have been exported in a single year. Astracan is also the great entrepôt of the trade with Persia and the countries east of the Caspian,—transmitting (chiefly through Armenian merchants) leather, furs, iron, copper, and tallow, in exchange for silks, cottons, raw silk, drugs, and carpets.

Baku, farther S., is the only other Caspian port deserving of notice.

PORTS OF THE BLACK SEA AND SEA OF AZOF.

Odessa lies in Cherson, on the N. coast of the Black Sea, lat. 46° 28′ N., long. 30° 43′ E., in a fine bay, with sufficient depth almost to the shore for the largest vessels; it besides possesses a harbour, with accommodation for 200 ships. Pop. 63,000. Although now ranking next to Petersburg in importance, it has grown up almost wholly since 1794. From the year 1817 it has been a free port, receiving its imports, which consist chiefly of tropical produce, oil, wine, spirits, timber, cotton-twist and raw cotton, silks, woollens, and other manufactured goods, within a certain enclosed space, exempt from duty. Odessa, from its advantageous situation and privileges, is the great emporium of the produce of S. Russia destined for exportation. Its principal staple is wheat, of which about 1,600,000 chetwerts arrived on an average of the three years ending 1840; and the average prices of the best, free on board, in the same period, was 34s. 6d. per quarter; and it is rarely under 25s. or 28s. It is mostly brought from the Ukraine in carts, owing to the difficult navigation of the Dnieper and Dniester. In 1839, the exports consisted of—1,210,232 chetwerts of wheat; about 200,000 chetwerts rye, oats, &c.; 155,000 chetwerts linseed; 118,000 poods wool; and 223,192 poods tallow; the whole, with hides, iron, copper, wax, caviar, potash, beef, furs, cordage, sailcloth, butter, isinglass, and other articles, amounting in value to 48,636,350 paper rubles, or £2,180,000. The chief intercourse is with Leghorn, Genoa, Malta, Constantinople, Marseilles, and Britain. Its navigation is much less interrupted by ice than Taganrog. In 1838, the amount of shipping despatched (exclusive of about 660 coasters) was 781 vessels, 206,588 tons; and the amounts since have been still more considerable.

Taganrog lies in the N. E. part of the Sea of Azof, in lat. 47° 12′ N., long. 38° 56′ E. Pop. 17,000. Its roadstead is so shallow that even ships of moderate burden require to be lightened at Kertsch or Feodosia; and its navigation is generally stopped by ice from November to March. Still, its advantageous situation for intercourse between the provinces on the Don and the Donetz and foreign countries, and its vicinity to the Volga and the Caspian, render its trade very considerable. Exports, corn, principally wheat; with tallow, hides, cordage, linens, iron, and hardware from Tula, copper, wax, and caviar. The imports are trifling. The chief intercourse is with Turkey and Italy. Ships liable to quarantine being prohibited from entering the Sea of Azof, much of the foreign trade is conducted through the medium of coasting vessels. About 60,000 tons of shipping are despatched annually.

The other ports of S. Russia are Kertsch, Feodosia, and Eupatoria in the Crimea; Marioupol on the Sea of Azof; Ismail and Reni on the Danube; and Redut-Kale on the coast of Circassia.

MEASURES, MONEY, BANKS, FINANCES, &c.

MEASURES AND WEIGHTS.

The British or Imperial foot and inch are in use; also the Dutch or Rhineland foot, inch, and palm; the Russian foot = 13·75 Imp. inches; the Moscow foot = 13·17 Imp. inches; the archine, cloth measure, of 16 verchoks, = 28 Imp. inches, and 100 archines = 77·77 Imp. yards; the sagene or fathom is 3 archines, or 7 Imp. feet. The verste or mile of 500 sagenes, or 1500 archines, = 3500 Imp. feet, = 5 Imp. furlongs, 12 poles, and 2 feet; and 104 verstes = 1 degree of the meridian nearly.

The deciatine, land measure, of 2400 square sagenes = 2 Imp. acres, 2 roods, 32 perches.

The vedro, liquid measure, of 100 tcharkeys, = 2·70 Imp. gallons, and 100 vedros = 270·45 Imp. gallons; the anker contains 2 stekars or 3 vedros, and the oxhoft contains 6 ankers.

The tchetvert or chetwert, corn measure, of 2 osmines, 4 payaks, 8 tchetveriks, 32 tchetvertkas, or 64 garnietz, = 5·77 Imp. bushels; and 100 chetwerts = 72·13 Imp. quarters, though at St Petersburg sometimes reckoned at 70½: the last is 16 chetwerts.

The pound of 32 loths, 96 zolotniks, or 6528 grains, = 6318½ troy grains, and 100 Russian lbs. = 90·26 lbs. avoirdupois; the pood of 40 Russian lbs. = 36 lbs., 1 oz., 11 drams avoirdupois, but commonly estimated at 36 lbs. only; and 10 poods = 1 berkovetz: the Nuremberg pound, used by apothecaries, = 5527 troy grains: the Dutch carat, used in weighing precious stones, = 3⅛ troy grains nearly.

Gold and silver are weighed with the Russian pound, as above; and their fineness is expressed in zolotniks and dolis; the pound or other weight being divided into 96 zolotniks, and the zolotnik into 96 dolis.

The preceding are the official measures and weights of Russia, and they are in general use throughout the empire, except in the recently acquired possessions, and in a few places where old systems continue to be partially employed: Of the latter the chief are the following:—

Riga.—100 ells, each of 2 feet, = 59·95 Imp. yards; and 13 ells = 10 Russian archines nearly. The hogshead is 6 ankers, 30 viertels, or 180 stoofs; and 100 stoofs = 28·68 Imp. gallons. The last of oats is 60 loofs; the last of wheat, barley, and linseed is 48 loofs; the last of rye is 45 loofs; and 100 loofs = 23·45 Imp. quarters, or 33¼ chetwerts nearly. The shippond is 20 lisponds, or 400 lbs.; and 100 lbs. of Riga = 92·16 lbs. avoirdupois; or 39 Riga lbs. = 1 Russian pood nearly. The mark = 3226 troy grains.

Poland.—The ell or lokci of 2 feet or 24 inches = 22·68 Imp. inches; and 100 ells = 63 Imp. yards. The mile, 20 to the degree, = 6076 Imp. yards. The morgen, or acre of 300 perches, = 1.384 Imp. acre; and 30 morgens = 1 wloka. The garniec, liquid measure, of 4 kwartas, or 16 kwaterkas, = 4 French litres, or 3½ Imp. quarts nearly; and 100 garniecs = 88 Imp. gallons: the becska is 25 garniecs. The Warsaw korsec, corn measure, of 4 cwiercs, 32 garniecs, or 128 kwartas, = 3·52 Imp. bushels; and 100 korsecs = 44·02 Imp. quarters. The pound of 16 ounces, 32 loths, or 128 drachms, = 6259 troy grains; and 100 Polish lbs. = 89·41 lbs. avoirdupois; the stone is 32, and the centner 160 Polish lbs. Bullion is weighed by the Warsaw mark, = 3113 troy grains; but coins by the Cologne mark.

MONEY.

The integer of account is the silver ruble, which is divided into 100 copecs, and equal in value to 3s. 1½d. sterling; or Ru. 6, cop. 40, = £1. Formerly accounts were kept in paper or bank rubles similarly divided; but this practice was abolished by an Imperial ukase in 1839, which established the silver ruble as the only legal measure of value throughout the empire. This ukase fixed the exchange of paper into specie at the rate of 350 copecs in paper for 100 copecs in silver; making the paper ruble worth 10¾d. sterling nearly.

The coins are,—In gold; imperials of 10 rubles, half-imperials of 5 rubles, double ducats, and ducats; the only gold coin minted at present is the half-imperial, weight 97½ troy grains, fineness 88 zolotniks, or 11/12ths, and value 16s. 1½d. sterling: In platina; pieces of 12, 6, and 3 rubles: In silver; rubles, poltins or ½ rubles, polpoltins or ¼ rubles, double-grive of 20 copecs, single-grive of 10 copecs, and pieces of 15 and 5 copecs; these are minted at the rate of 22¾ rubles of the fineness of 83⅓ zolotniks, from the Russian pound of fine silver: In copper; pieces of 2, 1, and ½ copecs.

The gold coins are directed, by the ukase of 1839, to be received and paid in all government-offices, with an agio of 3 per cent. Thus, the half-imperial of 5 rubles is reckoned at 5 rubles 15 copecs in silver.

Days of grace, 10 for bills after date, and 3 for bills after sight. The Julian Kalendar, or *Old Style*, is still used throughout the empire.

Poland.—Accounts are stated in florins (*zlots*) of 30 gros, each of 10 fen. The polish florin, being valued at the rate of 84 to the Cologne mark of fine silver, is equal 5¾d., but is commonly estimated at 6d. sterling.

BANKS.

The Imperial Assignation Bank, opened in St Petersburg and Moscow, 1770, and converted into a government establishment, 1786, has branches in all the principal towns, and circulates the national paper-money, sometimes called bank assignats, the amount of which outstanding, January 1, 1839, was 595,776,310 rubles = £28,370,300. The notes for 100, 50, and 25 rubles are on white paper; those for 10 rubles on pink paper; and those for 5 rubles on blue paper. The proportional value of this paper money to silver is fixed at 3½ to 1, as already noticed.

According to official accounts, the capital of this bank, January 1, 1839, was £1,386,465; the amount of their deposits, belonging to private parties, £6,488,938, and to government offices, £15,777,421, including £10,350,630 to the Commercial Bank; and the amount of loans, £23,272,828, due partly to private parties, but chiefly to government offices.

The Imperial Commercial Bank, founded at St Petersburg in 1818, partly under mercantile direction, has a capital of 30,000,000 paper rubles = £1,428,571. It receives deposits of coin and bullion, and has a department for transferring credits on the principle of the Bank of Hamburg. It is also a bank of discount, and makes advances upon merchandise of home production. Its property is protected against taxation, sequestration, or attachment; and subjects of countries with which Russia may be at war are entitled at all times to receive back their deposits. The bank has branches in all the principal commercial towns; and in 1838, the gross amount of its operations was £60,240,917.

There are likewise two Loan Banks;—one established for the nobility, and another, a Lombard, for advancing money on pawn and otherwise,—the profits of which belong to the Foundling Hospital of St Petersburg.

FINANCES.

The Revenue accounts are not published, but its annual amount is estimated at about 380,000,000 paper rubles, or £17,000,000; of which 40,000,000 rubles are derived from a capitation tax of 4 rubles a-head on all male boors belonging to individuals, and on some descriptions of freemen; 90,000,000 from the *obrok* or rent, paid by all male boors on the crown estates; 92,000,000 from customs duties; 100,000,000 from spirit duties; salt monopoly, 10,000,000; crown mines, 16,000,000; tax of 1½ per cent. on the declared capital of merchants, 8,000,000; seignorage on coin, 8,000,000; stamps, licenses, and similar imposts, 7,000,000; and miscellaneous items, 9,000,000 rubles. The taxes are partly farmed. Of the expenditure very little is known.

The National Debt amounted, January 1, 1839, exclusive of the bank assignats in circulation, to 935,146,592 rubles = £44,530,790; consisting partly of terminable, and partly of interminable debts, at 5 and 6 per cent. Of the latter, there were redeemed, up to 1839, by the Commissioners for the Discharge of Debts, £6,442,964. A considerable portion of the debt was contracted in Amsterdam and London; the agents in the former place being Hope and Company, and in the latter, Messrs Rothschild and Baring Brothers. Transactions in the foreign debt are generally effected at the fixed exchange of 3s. 1d. per silver ruble.

RUSSIA LEATHER (Ger. *Juften*. Rus. *Juft*, *Youft*), the tanned hides of oxen, manufactured in a manner peculiar to that country. It is soft, has a prominent grain, considerable lustre, and peculiar odour. In colour it is generally red or black; the former is much esteemed for binding books, and making articles where a fine durable leather is required; the latter is chiefly in demand in Russia for shoe and boot making. Both kinds, when genuine, throw out a peculiar odour, occasioned it is said by their being tanned with larch bark, mixed with spirits of tar.

RYE (Dan. *Rug*. Du. *Rog*. Fr. *Seigle*. Ger. *Roggen*. Rus. *Rosch*, *Sel*, *Jar*), a species of grain (*Secale cereale*) resembling wheat. It is the bread-corn of Germany and Russia; but in this country it is comparatively little cultivated, though in 1765 it is supposed to have been consumed in England by about one-seventh part of the population. It is now raised chiefly in Northumberland and Durham; though in the latter it is rarely grown alone, but mixed with wheat, in which form it is called *maslin*. In Scotland it is sown in various places, particularly on poor moorish soils in elevated districts, for which it is well adapted. In Orkney and Argyllshire it is used exclusively for the manufacture of straw plait.

S.

SABLE (Fr. *Zibeline*. Ger. *Zobel*. Rus. *Sobal*), a species of weasel (*Mustela sibellina*), celebrated for the fine quality and rich colour of its fur, the hairs of which turn with equal ease in every direction. This animal is a native of Northern Europe and Siberia. In Samoieda, Yakutsk, Kamtschatka, and Russian Lapland, it is found of the richest quality and darkest colour. [FURS.]

SADDLES and Harness are made in all the towns of the United Kingdom, but the chief seat of the manufacture is London. A progressive increase has of late years taken place in the foreign demand for these articles; and the declared value of the annual exports is now nearly £100,000. They are sent chiefly to the West and East Indies, and in smaller parcels to Australia, Cape of Good Hope, Spain, Brazil, and other countries.

SAFFLOWER (Fr. *Cartame*. Ger. *Safflor*. It. *Zaffrone*), the flowers of an annual plant (*Carthamus tinctorius*) growing in Egypt and the warmer parts of Asia, Europe, and America. They are of an orange-red colour, and are brought to this country in a dried state, for the sake of a dye which is extracted from them. About 5000 cwts. are annually imported, which, with the exception of from 300 to 500 cwts. from the United States, are brought almost wholly from the East Indies. About half this quantity is entered for home consumption. Safflower is chiefly used for dyeing silk; producing different tints of red and orange according to the alteratives employed in combination. It also forms the basis of rouge. The dye is sometimes made into cakes, termed *stripped safflower*.

SAFFRON (Fr. *Safran*. Ger. *Saffran*. It. *Zafferano*. Sp. *Azafran*) consists of the summits of the pistils of the *Crocus sativus*, a bulbous plant, found in various parts of the S. of Europe and Asia, and cultivated near Saffron Walden in Essex. The pistils are generally dried and compressed into firm cakes, but the finest, called *hay saffron*, consists of the pistils merely dried. Cake saffron should be chosen fresh, neither dry nor very moist, close, of a fiery orange red colour, and an acrid diffusive odour. It should be preserved in a bladder within a tin box. The English saffron is superior to any that is imported. It is used as a colouring substance, and to a small extent in medicine. Meadow saffron is a bulbous plant (*Colchicum autumnale*) of a different kind, the roots and seeds of which are also employed medicinally.

SAGAPENUM, a gum resin, supposed to be a kind of assafœtida (*Ferula Persica*). It is sometimes agglutinated in masses of various sizes, but ought to consist chiefly of whitish shining grains, tenacious, and, when softened by heat, very viscid, having a smell resembling gum ammoniac, and a taste like assafœtida. It is inflammable, but less soluble in alcohol than in water. Sagapenum is used in medicine, holding a kind of middle place between assafœtida and galbanum. It is imported from Alexandria.

SAGO, a farinaceous alimentary substance, obtained from the pith of several species of palm, found in the Eastern Islands and S. E. of Asia. The quantity yielded by one tree is very considerable, sometimes 500 or 600 lbs. The pith is excavated, separated from the filaments in water, and reduced to a pulp, which is baked into cakes, and in this state forms a principal article of food in the Eastern Islands. That which is imported, however, occurs in the form of grains, from having been passed through a coarse sieve, when half dry, upon hot plates of iron. Of this granulated kind there are two varieties—pearl sago, in small, hard, semi-transparent grains, about the size of a pin's head; and the common or brown sago, in larger grains, about the size of pot barley. Both are inodorous, with an insipid taste. In many of its properties sago resembles starch. It is chiefly used as a light nutritive diet for children and invalids.

The best sago is the produce of Siak in Sumatra; that of Borneo is next; and the produce of the Moluccas, though greatest in quantity, is lowest in estimation. The great emporium of the trade is Singapore. The annual consumption of this country—in 1820 only 1400 cwts.—is now upwards of 55,000 cwts., arising mainly from the reduction of the duty from 74s. 8d. to 1s. per cwt.

SAILCLOTH or CANVASS (Du. *Zeildoek*. Fr. *Toile à voile*. Ger. *Segeltuch*. It. *Canevazza*, *Lona*. Rus. *Parussina*. Por. & Sp. *Lona*), a coarse strong fabric, woven of hemp or flax. It is made in *bolts*, each of 28 ells or 35 yards; and the qualities are numbered from No. 1, the strongest, used for storm sails, to No. 8, employed for the smallest ones, such as small studding sails, &c. Dundee is the chief seat of this manufacture in Britain.

ST HELENA, a small island of the S. Atlantic Ocean, subject to Britain.

This unimportant island, which is only about 10½ miles in length by 6½ in breadth, derives its interest solely from having been the scene of Napoleon's imprisonment and death (1815-1821). The shores are rocky, and the interior is a lofty plateau, with a climate mild but unhealthy. At present it is chiefly used as a place of refreshment for ships proceeding northward; and its commerce consists in the importation of ship-stores, not exceeding £50,000 a-year. The only town and port is Jamestown, in lat. 15° 15′ S., long. 5° 46′ W., about 570 leagues N.W. from the Cape of Good Hope.

SAL AMMONIAC. [Ammonia.]

SALE is a contract by which the proprietor of some valuable commodity engages to transfer his property therein to another person, in consideration of a sum of money, called the price. The person who sells is called the vendor or seller, he who buys the vendee or purchaser. The essentials of the contract are—that there be a subject, that there be a price ascertained or ascertainable through some means agreed on, and that the parties be capable of contracting. The parties must be at one as to the subject; for where A intends to sell malt, and B thinks he is purchasing corn, whatever claims may lie between the parties, there is no sale. If the agreement be founded on a fraud, it is void. The most ordinary description of fraud is deception or misrepresentation as to the state of the property. If the purchaser is *aware*, however, that a statement is a misrepresentation, it would appear that he is bound to the bargain; for the fraud, though intended, has not been his inducement to purchase. Stipulations that sales shall not be void through misstatements, and that the property must be taken with all faults, seem only to cover ordinary defects, but not to protect the purchase in the case of deliberate fraud. Where goods are sold by sample, they must correspond in quality. Concealment may be a fraud, as well as misstatement; as, where a picture is sold among others which have belonged to an eminent connoisseur, the purchaser being led into the mistake that it belonged to his collection. It is a fraud to take advantage of imbecility or inebriety. "It seems to have been formerly held, even in equity, that a party entering into a contract when in a state of intoxication, was not entitled to relief, unless some fraud or contrivance had been practised by the other party; but probably the contract would now be held void if the defendant could show that he was so drunk at the time that he did not know what he was doing, although the drunkenness was entirely his own act" (*Morton*, 135). There may be fraud on the side of the purchaser, which will vitiate the sale; but his side of the contract does not admit of so many varieties of deception; and it is very seldom that his act can be shown to have affected the foundation of the contract. If a man purchase goods, and, having money sufficient to pay for them, spends the money otherwise, in the full knowledge that he has no other resource from which they can be paid, it is undoubtedly a fraud; but the contract is completed before it is done. There may, however, be circumstances showing a direct fraudulent design at the time of the purchase; as, where payment is given in a fictitious bill or in a draft on a banker with whom the purchaser has no funds. In such a case, money or its equivalent being the consideration on which the vendor agrees to sell, and worthless paper being substituted, the contract is void; and if the goods have changed owners, they may be reclaimed. When a fraud is discovered, if the party wishes to be rid of the bargain, he ought to take immediate steps for recovering what he has parted with; if he endeavour in the mean time to get the bargain otherwise performed, he will probably involve himself in a new contract. Thus, in the case of a fictitious draft, if the seller, instead of re-demanding the goods, were to endeavour to get payment for them, he would be held merely as placing the contract on a different footing. A sale procured by force is vitiated. Sales involving a fraud against third parties, for immoral purposes, and contrary to public policy, are void. [Contract.]

There are certain requisites of the article sold, generally termed Implied warranties, in opposition to Express warranties, which are explained below. There can be no implied warranty, however, as to the general qualities of the article. Of these it is the purchaser's duty to satisfy himself. In ordinary language, "his eye is his merchant;" and implied warranties resolve themselves into two conditions,—1*st*, That the subject is the vendor's own and at his free disposal; and, 2*d*, That it is what he sells it for. A thing stolen or found is not at the lawful disposal of the thief or finder, or of any person deriving right through them; but in England there is an exception in favour of a fair purchaser in *market overt* or in open market. In the city of London, every day except Sunday is a market day; and every shop or place in which goods are exposed for sale is the market, in as far as respects the kind of goods there sold. A wharf in London is not a market overt. In Bristol, and wherever a special custom to that effect is established, shops are market overt for their particular commodities; but in the country, generally, market overt is only held on particular days, and in a particular spot. A sale in a back room or warehouse, or in a room shuttered up, or during the night-time, will not give the protection of market overt; and if the purchaser is aware of the bad title, the sale is vitiated, wherever it takes place. The doctrine of market overt does not extend to Scotland. There "the possessor of goods which have been stolen by him, could not make a valid sale of them in any circumstances, because by our law no such privilege is attached to sales in open market as in England; and the seller never having had a title to the property of the goods sold in himself, could not give such a title to a purchaser" (*Brown on Sale*, 29). As to the other implied warranty, that the subject is what it is sold for, it is now no longer law that the amount of the price infers a warranty that the goods shall be of a certain quality. Where it is consistent with commercial practice to specify any particular kind of defect, omission to state it is held a warranty of soundness. Where the article is supplied for a particular purpose, there is an implied warranty that it is of the kind applicable to that purpose; so, when ale is purchased for the West India market, it must be suited to stand the climate; and if a horse is purchased for riding, a draught horse, however valuable, will not be a fitting substitute. Where a bargain is annulled on such a ground, however, it must be distinctly known that the special purpose was understood between the parties, and that the buyer was ignorant that what he has purchased is unsuitable. Where a warranty is express, the sale is vitiated if it prove false, whether the purchaser is aware of its falsehood or not.

Form.—The essentials of sale are—that the parties consent to the bargain; and, in the general case, evidence of that consent completes the transaction. In some cases, however, the law has required certain formalities, without which no sale takes place. Real property cannot be sold in any part of the kingdom without the intervention of writing. The Registration Act provides specifically a form, which cannot be departed from, in the vendition of ships, which will be found fully set forth in the abridgment of that act. In other respects, the contract of sale is in Scotland open to verbal evidence of consent: in England, however, it is regulated by the Statute of Frauds, 29 Ch. II. c. 3, as follows:—By § 17, "no contract for the sale of any goods, wares, and merchandises, for the price of £10 or upwards, shall be good, except the buyer shall accept part of the goods so sold, and actually receive the same, or give something in earnest to bind the bargain, or in part of payment; or that some note or memorandum in writing of the said bargain be made and signed by the parties to be charged by such contract, or their agents, thereunto lawfully authorized." By 9 Geo. IV. c. 14, § 7, this section is extended to sales, "notwithstanding the goods may be intended to be delivered at some future time, or may not, at the time of such contract, be actually made, procured, or provided, or fit or ready for delivery, or some act may be requisite for the making or completing thereof, or rendering the same fit for delivery." Sales by auction are ruled by the statute. [AUCTION.] "It is said that a sale of stock is within the statute, though this has been doubted, because there can be no actual delivery" (*Morton*, 53). It would appear that sales of shares in public companies are not within the statute. The delivery must be accompanied by acceptance on the part of the purchaser; so, where one ordered several articles in a shop, some of which he marked with a pencil, while others were measured in his presence, and in pursuance of his directions the whole were sent to his house, but he refused to receive them, it was no sale (Astey *v.* Emery, 4 *M. & S.*, 262). Where two distinct kinds of goods are purchased, delivery and acceptance of part of one kind will not affect the whole. Constructive delivery may take place as to bulky articles, *e. g.* by delivery of the key of the warehouse, or by marking the purchaser's name on the goods. It is not sufficient delivery, however, that goods are measured or even set apart. Delivery to an agent of the purchaser, such as a carrier, if with the purchaser's knowledge and assent, is sufficient. Earnest is another alternative. It must consist of the giving away of something valuable, and not of a mere sign or ceremony, such as crossing the hand with a shilling. Another criterion by the act, is a written note or memorandum of the bargain, signed by the parties or their agents. Much latitude is allowed in interpreting this provision. The meaning of a variety of documents may be taken conjointly to prove a sale; but parole evidence will not be admitted to control such meaning, though it may be employed to identify the handwriting. The price ought to appear in the writing, if it has been in the view of the parties. It is not necessary that the signatures should be the formal autographs at the end of the document which generally receive that designation. "I, A B, agree to sell," or "Mr A B has agreed," &c., is a sufficient signature by A B. The names of both parties must appear on the writing; but the signature requires to be only by the party charged. An agent signing need not be authorized in writing. [PRINCIPAL AND AGENT.] An auctioneer is an agent in the meaning of the statute. [AUCTION.]

Delivery.—According to Blackstone, "as soon as the bargain is struck, the property of the goods is transferred to the vendee" (ii. 448). The seller is after that their mere custodier; and if they perish their loss falls on their new proprietor, viz. the purchaser. In Scotland a different doctrine is followed, in pursuance of the civil law. There "the *property* of the thing sold *is not transferred* from the vendor to the vendee by the mere operation of the contract. . . . *Delivery* is necessary to change the property" (*Brown*, 3). The distinction, however, is little more than nominal. In England, the seller retains a lien on the thing sold for the price, and thus obtains the remedy which he has in Scotland by continuing to be the proprietor; and in both countries, goods continuing in possession of the vendor after he becomes bankrupt, accrue to the benefit of his creditors. The removal of the goods, at however short a period before bankruptcy, will be sufficient to take them out of the bankrupt estate. Symbolical delivery will be sufficient in the case of bulky articles, but it must be of a more distinct nature than the sort of delivery required by the Statute of Frauds to complete the contract. Transfer of the name in the books of a wharfinger, the assignment of a bill of lading, or of any sort of transfer-ticket, is delivery. It would appear that a marking of the purchaser's initials will not transfer the goods in the seller's warehouse; but that such an act of appropriation as bottling wine in the premises of the seller, and sealing the bottles with his (the buyer's) seal, will be sufficient. Possession by an agent is possession by his principal. The seller may specifically appropriate the goods to the purchaser, by giving directions to transmit them, and may thus take them out of his bankrupt estate. When the goods are in the hands of the purchaser or his agent, they become part of his estate, and go to the creditors on his bankruptcy. Goods sent on sale and return are part of the estate of the bankrupt consignee, unless they have been left unpacked, and without any right of ownership being exercised over them.

Price, &c.—It is the duty of the seller to perform his share of the contract, by delivering the property, or giving the purchaser all facility in taking possession; and if he refuse, the purchaser may in England bring assumpsit for non-delivery. In doing so he must prove that he has performed all the conditions incumbent on him; and especially that he has paid, or tendered payment of the price, unless the sale be on credit. In this latter case the vendor has no lien, and cannot refuse delivery, except in the circumstance of the goods being left in his possession until the period of credit expires. It is the duty of the purchaser first to take delivery of the goods, and then to pay for them. The vendor, if he have performed his own share in the contract, may sue him, for goods bargained and sold, if the property be delivered, in which form he will recover his entire price, or specially upon the contract, in which case he will recover the amount of damages which he has actually sustained. In Scotland, there is no such distinction in the form and effects of the action, which is, in all cases, an ordinary suit for performance of the contract, or for damages, the result being moulded to the circumstances. If credit is stipulated for, an action for goods sold cannot be brought until the period of it has expired, even though the vendee should have left unperformed some special condition stipulated for in the mean time (as, that he shall give a particular bill) or though he have given unequivocal tokens of a fraudulent intention not to pay; the remedy in such case is an action of trover for recovery of the goods, on the nullity of the contract, as above. If the purchaser show that he has taken the proper means to effect payment, it will lie on the vendor to show that he has not been paid, by proving that the money intrusted to a carrier did not come to hand, or that a bill sent in payment was dishonoured. If the vendor have taken a bill, he gives credit, and cannot recover on the original transaction, until the bill is dishonoured, unless it be fictitious, or be otherwise unavailable, as, for want of a stamp. If the bill be lost, the seller can sue on the original contract, securing the vendee against having to pay the amount to a third party. If the seller have given directions for transmitting the money in a particular manner, the buyer, by complying with the directions, and using all due caution, relieves himself of responsibility,—any loss which may occur falling on the seller; as, where it was agreed that the purchase-money should be transferred in the books of the mutual banker of the parties, who thereafter failed (Eyles *v.* Ellis, 4 *Bingh.* 112). Payment to the proper agent of the seller will release the buyer. When no price is named, the market price, or, as it would seem, the lowest price at which such goods are sold, will be the criterion: if the vendee take means to suppress information on this point, the presumption will be in favour of a high price. [FACTOR. PRINCIPAL AND AGENT.]

(*Morton on Vendors and Purchasers. Smith's Mercantile L.*, 393-431. *Brown on Sale.*)

SALEP, an alimentary powder obtained from the dried roots of the Orchis plant (*Orchis mascula*). It is a common article of diet in Turkey and Persia.

SALMA, a measure of capacity in Malta, Naples, and Sicily.

SALMON, a fish (*Salmo salar*) common in the rivers of Britain, Ireland, and other northern countries. When young it is called "smolt;" "salmon peal" when a little older but under 2 lbs. weight; and "grilse" when still larger. When full grown it weighs generally from 6 to 12 lbs.; but it has been caught so large as 83 lbs. Salmon pass the summer in the sea, or near the mouths of the estuaries; in autumn they instinctively ascend the rivers, and deposit their spawn in the upper and shallow pools about the end of the season. After spawning they are unfit for food. They descend the rivers with the floods at the end of winter or beginning of spring, and ultimately gain the sea, where they quickly recover their condition. The first attack made upon them is in the summer months, when they rove close along the coast in quest of the rivers in which they annually cast their spawn. They are then, as well as in the estuaries, caught chiefly by stake-nets; whereas in the rivers they are taken by coble-nets and other devices. The season of the migration of the salmon varies, depending, as some allege, on the warmth of the waters. The northern rivers are, with little exception, the earliest; the number caught in the spring is small compared with that taken as the summer advances.

The progress of population and manufactures has rendered the salmon scarce in England; but the fisheries in the Tay, Tweed, Don, Dee, and other rivers in Scotland, though less extensive than formerly, still send an annual supply of between 2,000,000 and 3,000,000 lbs. to London; and they continue plentiful in the Erne, Moy, Bann, Blackwater, Shannon, and nearly all the principal streams along the N. and W. coasts of Ireland. The fish are carried to town in a fresh state, packed in ice, from Scotland and Ireland; and the quantity pickled at the fishing stations is now exceedingly small. They are consigned to commission agents, who charge five per cent., and run the risk of all bad debts. The average wholesale price for the season in the metropolis is about 10d. per lb.

The salmon fishings are private property, and many of them are of great value. Much discussion has frequently arisen regarding the duration of the close time and the modes of fishing in different parts of the rivers. In Scotland the prohibited period extends on the Tweed from October 15 to February 15; and north of the Tweed, from September 14 to February 1. Heavy penalties are imposed on the taking of spawn, fry, or unclean fish (24 Geo. II. c. 23; 9 Geo. IV. c. 39).

SAL PRUNELLA. [NITRATE OF POTASH.]

SALT (Du. *Zout.* Fr. *Sel.* Ger. *Salz.* It. *Sale.* Por. & Sp. *Sal.* Rus. *Sol*), the muriate of soda or chloride of sodium of chemists, is a well-known substance, of the highest utility. It crystallizes in cubes. When pure it is not deliquescent. One part is soluble in 2¾ths of cold water, and in little less of hot, so that it cannot be crystallized but by evaporation. Specific gravity, 2·125. Salt abounds in various parts of the globe. The waters of the ocean every where contain it, though in different proportions. In England and elsewhere it is found in large masses, or in rocks under the earth. In other instances brine springs afford the means of a ready supply; and throughout a considerable part of the sandy districts of Africa and Asia, the soil itself abounds with it. Sea-salt is obtained in three ways; 1*st*, In countries having a long and hot summer, and a soil neither muddy nor porous, it is formed by solar evaporation from sea-water collected into pools. In this manner it is prepared in Spain, Portugal (particularly at St Ubes), France, and various places on the Mediterranean; in India, Ceylon, Siam, Tonquin, and China; and from all these parts, except the last, large quantities are exported. *2d*, In some countries, having a similar climate and soil, it is formed by solar evaporation in natural pools which spring-tides have previously filled with sea-water. This kind, chemically purer than that first described, is produced and exported in great quantities from the Cape de Verde Islands; from Turk's Island, and St Martin's in the West Indies; and from Kangaroo Island on the S. coast of Australia. In these places it is raked or scraped into a heap, and is at once fit for exportation. These two kinds of salt are known under the name of *bay-salt*. *3d*, Salt is manufactured by artificial heat from sea-water; but the process is expensive, and the result chemically impure. In this manner considerable quantities were formerly manufactured at Lymington in Hampshire, and various other places in this country; but, since the abolition of the duties, these works have been either abandoned or greatly reduced.

In a commercial point of view, perhaps the most important source of supply consists of rock-salt and brine-springs. In England, the brine-springs and beds of rock-salt are of such extent as to be alone sufficient to supply the whole world for an indefinite period. They are situated chiefly at Northwich and other places contiguous to the river Weaver in Cheshire, and at Droitwich in Worcestershire. In these places the brine-springs, from which by far the largest supply of salt is obtained, have been worked from a very remote era; but the discovery and working of the fossil salt are comparatively of modern date. The produce of both kinds, however, has been of late years much increased; and the English salt-trade is now an object of great national importance. Besides the immense home consumption, upwards of 12,000,000 bushels, exceeding in value £200,000, are annually exported, chiefly to the United States, Canada, Russia, Prussia, Germany, Holland, Denmark, Belgium, and the western coast of Africa. Salt is of most extensive use as a preservative of food and as a condiment; as a source of soda, muriatic acid, and chlorine; and for various agricultural and horticultural purposes. Its comparative value is determined by its purity and its fitness for use. That kind which possesses most eminently the combined properties of hardness, compactness, and perfection of crystals, will be best adapted to the purpose of preserving provisions, because it will remain permanently between the different layers, or will be very gradually dissolved by the fluids that exude from the several substances; thus furnishing a slow but constant supply of saturated brine. On the other hand, for the purpose of preparing the pickle or of *striking* the meat, the smaller-grained varieties answer equally well, or, on account of their greater solubility, even better, provided they be equally pure. The tax on salt in Britain was formerly so high as 15s. per bushel; but in 1823 it was reduced from that rate to 2s.; and in 1825 it was wholly repealed. The retail price of the mineral has in consequence been reduced from 4½d. to ½d. per lb.

SALTPETRE. [NITRATE OF POTASH.]

SALVAGE, in the law of shipping, is a remuneration to those who, by gratuitous exertion or risk, save a ship or cargo, or any portion of them, from destruction by the elements, or from loss by capture. It is not due to those who are bound by law and contract to exert themselves on the occasion; and thus the master and crew can have no salvage for services in protecting their own vessel. When a vessel is captured, salvage is due on her recapture. Salvage is due, moreover, in cases where accident rather than exertion or risk has enabled the party to preserve the property; as, where portions of ship's apparel, anchors, or merchandise, are picked up at sea. Passengers are not in the general case entitled to any reward for assistance in saving the vessel, in the safety of which their own lives, or at least their comfort and convenience, are embarked; but the passenger is not bound like the mariner to stick to the vessel; and if he remain when he could depart, and perform gratuitous and perilous services, he is entitled to a consideration. "If the preservation of life can be connected with the preservation of property, whether by accident or not, the Court of Admiralty can take notice of it, but has no power of remunerating the mere preservation of life, which must be left to private bounty" (*Abbot*, 508). There is no rule for estimating the amount of salvage in all cases; nor, from the nature of the claim, does any fixed rule seem capable of being applied. Where the amount is disputed, the jury, or (as in the cases mentioned below) the justices, must consider the whole circumstances, and award accordingly. The master and crew of the vessel—the individuals, in short, who have exerted themselves or incurred personal risk—are those who are primarily entitled to the salvage allowance; but where their ship has been put in peril, or has suffered from wear and tear, the owners are entitled to a proportional compensation. Where third parties interfere to assist in a salvage, there must be a clear case of necessity for their aid, to justify their claim for a share of the salvage-money: but it is a rule that, in case of preservation from an enemy, a vessel of war, if in sight, shares in the salvage. The property actually benefited is charged with the expense; and so freight is chargeable, if it was earned, and has been preserved by the act of the salvors.

When property wrecked or abandoned at sea is found and taken possession of, the finder has a lien on it till a reasonable salvage be tendered to him. Where, however, the parties whose right and duty it is to protect the property are present, other parties are not entitled to take possession of it, or to interfere, except as assistants. By an old statute (12 Anne, stat. 2, c. 18), sheriffs, justices, mayors, bailiffs, heads of corporations, constables, head-boroughs, and tithing-men, are bound to give assistance at the call of the commander of a ship in distress on the coast, and to demand assistance from the people in the neighbourhood or from vessels at anchor. By the same act, the salvors in such a case must be paid a reasonable reward within 30 days,—the property saved remaining for security in the custody of the custom-house officers. If the parties disagree, they may name three justices as arbiters. By 26 Geo. II. c. 19, § 5, a similar remedy was given to parties voluntarily giving their services without being commanded by official persons.* In England, the jurisdiction in salvage cases, other than as above, is in the Court of Admiralty, where the service is performed at sea or between high and low water mark (1 & 2 Geo. IV. c. 75, § 31). In Scotland, it is in the Court of Session. An act applying solely to England (1 & 2 Geo. IV. c. 75) regulates the disposal of wrecked or abandoned property found at sea by pilots and others; and applies the arrangement stated above of the arbitration of three justices to questions of salvage in such case, and to all disputes respecting remuneration for service done in the preservation of property or life on the coast. There is an appeal to the Court of Admiralty. There is a special statute, making similar provisions for the Cinque Ports (1 & 2 Geo. IV. c. 76). There are directions for the sale of goods to meet claims of salvage in the Customs Regulations Act. [CUSTOMS, § 49.] (*Abbot on Shipping*, 493-530; *Statutes quoted.*)

SAMPLE, a small specimen of any kind of merchandise.

SANDAL-WOOD, an aromatic wood, much used in India and China for cabinet-work, toys, and perfumes, also in medicine. It is obtained from a small tree (*Santalum album*), resembling the myrtle, found in Malabar, in Timor, and in the Sandwich and Fijee Islands; the produce of the first is that in most esteem. White sandal is the exterior part of the tree; and yellow sandal the interior. The last, which has most hardness and fragrance, should be selected in large pieces: the billet nearest the root, called root sandal, is of superior quality. This commodity improves by keeping.

SANDARAC, a resinous substance procured from a large tree (*Callitris quadrivalvis*) found in Temme in Morocco, where it is called *arar*. It occurs in yellowish-white tears, or in small masses; and is used as an ingredient in varnishes and incense, and, when reduced to a powder, forms the article called *pounce*.

SANDWICH OR HAWAII ISLANDS, a group situate in the Pacific, betwixt lat. 18° 54′ and 22° 15′ N., and long. 199° 36′ and 205° 6′ E. They were discovered by Cook in 1778; and consist of 11 islands, of which 7 are inhabited. Population in 1836, 108,000. Government, an hereditary despotism.

These islands are of volcanic origin, and in respect of climate differ little from the W. Indies, though they are more temperate. The soil is generally fertile; and the natives mild, honest, docile, and enterprising, having been reclaimed from the barbarous habits which formerly prevailed. The islands are favourably situated for trade, being in the route between America and China; and they have of late become an entrepôt for the commerce of the N. W. coast of America, as well as a place of refreshment for the whalers in the Pacific. The chief port is Honoruru, situate in Oahu, where consuls from Britain and the United States reside. It affords facilities for the repairing of ships. Imports—manufactured goods, sheathing copper, ship-stores and provisions, tea, sugar, skins, hides, lumber, furs, pearl-shell, turtle-shell, arrow-root, and cocoa-nut oil. Exports—salt and sandal-wood, besides provisions and other supplies to whale-ships, and foreign merchandise re-shipped to California, the Russian settlements, Mexico, the South Sea Islands, Europe, and the United States. In 1835, the value of imports was £95,250; of exports, £92,075. The goods imported were brought by 34 vessels, the tonnage being 5623; besides which, 70 whale-vessels visited the port. A commercial treaty was concluded between Lord E. Russell, captain of the Actæon, and King Tamehameha III.

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* There is a question whether this is repealed by 6 Geo. IV. c. 105, § 100. There is a like provision in the 37th sect. of the 1 & 2 Geo. IV. c. 75, applicable only to England.

SAPAN-WOOD, a dye-wood similar to Brazil-wood, but containing much less colouring matter. It is the product of a thorny tree (*Cæsalpinia sapan*), indigenous to S. India, Siam, Pegu, and the Eastern Islands; from whence about 16,000 bazar maunds were in the year 1838 imported into Calcutta, about one-fourth of which was re-exported to England.

SAPPHIRE, a beautiful precious stone, and, after the diamond, the most valuable of gems. It occurs crystallized in six-sided prisms, variously terminated, and in rolled masses, which are colourless, or of a blue-yellow or yellowish-green tinge, and transparent or translucent. The most highly prized varieties are the crimson and carmine-red. The stones called oriental ruby, oriental topaz, oriental amethyst, and oriental emerald, are red, yellow, violet, and green sapphires, distinguishable from the other gems of the same name, without the prefix *oriental*, by their superior hardness and greater specific gravity. It is found in Pegu, France, and Germany; but the finest are brought from Ceylon. The *sapphire d'eau* of jewellers is a transparent iolite from Ceylon.

SARCOCOLLA, a gum resin produced in N. Africa, Persia, and Arabia, by a shrub, the *Penæa sarcocolla*. It occurs in small whitish-yellow grains, of a bitter taste, and is celebrated for conglutinating wounds.

SARDINES, a species of anchovy (*Engraulus meletta*, Cuv.) common in the Mediterranean. It tapers very much towards the tail, and is of a dark brown colour. Sardines are frequently mixed with anchovies, but they are much inferior.

SARDINIA, KINGDOM OF, comprises the N. W. part of Italy, bounded N. by Switzerland, E. by Lombardy and Parma, S. by Gulf of Genoa, and W. by France; also the island of Sardinia in the Mediterranean. Area, 29,102 sq. miles. Population in 1838, 4,650,368. Capital, Turin, an inland city; pop. 114,000. Government, an hereditary monarchy, nearly absolute.

Of the continental part, the most extensive and fertile is Piedmont, consisting of the upper basin of the Po, from which, and its affluents, the country, though naturally parched by heat, is so extensively and skilfully irrigated, that it yields a surplus of corn, cattle, French beans, and hemp: its chief other products are wine, fruit, and, above all, silk of the finest quality. Savoy, separated from the preceding by the Alps, is a poor hilly country. And the narrow maritime districts of Genoa and Nice, divided from Piedmont by the Apennines, are also hilly and rocky; but have a south aspect highly favourable for the olive. The mineral wealth of these territories has been little explored. Iron, lead, copper, and other metals are said to abound; and marble and alabaster are both plentiful and largely exported. There are some iron-works; but the principal manufactures are those of silk, velvets, and hosiery, mostly consumed in Italy, coarse woollens and linens, canvass, cables, paper, glass, and works of art.

The island of Sardinia, though exceeded by few regions in natural fertility, is at present the least valuable portion of the kingdom; both the country and the population being, from a variety of causes, still in a semi-barbarous state. There is, however, a surplus of corn for exportation; in good years, according to Mr Macgregor's Report on Sicily (p. 71), to the amount of 500,000 bushels wheat; 250,000 of barley; and 370,000 of pease and beans. The chief other products are wine, skins, linseed, flax, olive-oil, wool, and barilla. The fisheries on the coast are of some importance, particularly those of coral and tunnies.

We possess no very recent or authentic account of the maritime commerce of the Sardinian states. It centres in Genoa, which, besides being the great seat of their export and import trade, is the channel through which much of the foreign trade of Switzerland and other neighbouring countries passes, and is, next to Leghorn, the chief entrepôt for Mediterranean commerce generally; to all which facilities are afforded by the abolition of transit-dues on goods passing through the states, low duties on consumption, and the establishment at Genoa of *porto-franco*, or bonded warehouses. In this way, olive-oil, wheat, sugar, coffee, cottons, woollens, linens, cotton wool and yarn, silks, indigo, salt-fish, drugs, hides, tobacco, wine, cheese, and other principal articles of trade, appear on the public accounts both as imports and exports. In 1835, the maritime imports amounted to £4,800,000; the exports to £3,440,000; and the aggregate amount of shipping entered was 2927 vessels, 268,109 tons. Of the shipping, 87 vessels, 15,068 tons, were from the United Kingdom, with which a treaty was concluded September 6, 1841, placing the ships of the two states on a footing of reciprocity as to privileges.

PORTS.—*Genoa*, styled from its magnificent appearance *la superba*, is advantageously situated in the bay of the same name, lat. 44° 24′ N., long. 8° 54′ E. Pop. 97,000. The harbour, formed by two moles, is accessible to large vessels. It was in the middle ages the rival of Venice; and its trade is, from the circumstances already noticed, still very considerable. Its chief commercial relations are with Britain, France, the Austrian and Neapolitan states, and Sicily; but it has also an active intercourse with the Russian ports of the Black Sea, from whence wheat, wool, and other articles are imported; the Levant; and Brazil, from which sugar, coffee, and other tropical productions are brought. Its trade is mostly carried on under the national flag,—the Genoese being distinguished for maritime enterprise. In 1835, the value of the imports into the arrondissement of Genoa was £3,840,000; and of the exports £2,520,000.

Nice lies about 90 miles S. W. of Genoa, near the borders of France, lat. 43° 41′ N., long. 7° 17′ E. Pop. 34,000. The port, accessible for vessels of 300 tons, is spacious and secure. Imports, corn, wine, manufactured goods, salt-fish, and colonials. Exports, olive-oil, fruit, &c. From 80,000 to 100,000 tons of shipping enter annually, chiefly national and French.

Cagliari, in the island of Sardinia, lies in a gulf on its S. side, in lat. 39° 12′ N., long. 9° 7′ E. Pop. 26,000. There is excellent anchorage, and a pier harbour. Exports, the produce of the island already described; imports, chiefly manufactured goods and tropical produce.

MEASURES, MONEY, FINANCES, &c.

MEASURES AND WEIGHTS.—*In Genoa*, the braccio of 2⅓ palmi = 22·69 Imp. inches; the canna piccola used by tradesmen = 9 palmi, the canna grossa used by merchants = 12 palmi, and the custom-house canna = 10 palmi. The mezzarola wine measure of 2 barili or 100 pints = 32·67 Imp. gallons; the oil barile of 4 quarti or 64 quarteroni = 14·23 Imp. gallons. The corn mina of 2 quarti or 96 gombette = 3·31 Imp. bushels. 100 lbs. peso sottile (used for commodities of small bulk) = 69·85 lbs. avoird.; 100 lbs. peso grosso = 76·88 lbs. avoird.; the rottolo = 1½ lb. peso grosso.

In Turin, the raso or ell = 23·60 Imp. inches. The mile of 800 trabucchi = 2697 Imp. yards; and the Piedmontese mile = 2771 Imp. yards. The giornate of 100 tavole = 3¾ Imp. roods nearly. The brenta of 6 rubbi = 12·41 Imp. gallons; the carro of oil is 10 brente. The corn sacco of 3 staje = 3·17 Imp. bushels. The pound of 1½ mark = 5693 troy grains; and 4 rubbi, or 100 lbs. = 81·33 lbs. avoirdupois.

In Nice, the ell = 46·77 Imp. inches; the charge, liquid measure, of 12 rubbi, = 20·75 Imp. gallons; the charge, corn measure, of 4 setiers, = 4·40 Imp. bushels; the quintal of 6 rubbi or 150 lbs. = 103·14 lbs. avoirdupois.

In Cagliari, the raso or ell = 21·63 Imp. inches. The restiere, corn measure, of 3 starelli, = 4·04 Imp. bushels. The cantaro of 4 rubbi, or 104 lbs., = 91 lbs. avoirdupois.

MONEY.—Accounts are now generally stated in Italian livres (or *lire nuove*), of 100 centesimi. The lira nuova is a silver coin, equal in value to the French franc, or 9½d. sterling. The other coins, since 1827, have also been similar to those of France.

Prior to 1827, accounts were stated in Genoa in lire *fuori banco* of 20 soldi or 240 denari; and 5¾ fuori banco were reckoned equal to 1 pezza of exchange. 5 lire nuove = 6 lire fuori banco.

The usance of bills from London is 3 months' date. There are no days of grace; but 30 days are allowed to the holder of a bill to demand payment.

In Cagliari, accounts are stated in lire of 4 reali, or 20 soldi; and 10 reali, or 2½ lire, = 1 scudo, worth about 3s. 7½d. sterling.

FINANCES.—The Revenue in 1839 was about £2,960,000; and the expenditure nearly the same. Debt, £5,800,000; bearing interest at 4 and 5 per cent. The credit of this state is high, owing to the progressive liquidation of the debt, and the punctual payment of the interest.

SARDONYX, a species of agate; being a variety of onyx, in which the opaque white alternates with a rich deep orange brown, of considerable translucency; and as this is of rare occurrence, the sardonyx is of greater value. The finest are brought from the East.

SARSAPARILLA, the root of different species of *Smilax*, an evergreen climbing shrub, growing in the tropical parts of America. It is several feet in length; about the thickness of a quill, with joints at short distances. The cuticle is brown; the cortical part or bark, in which the virtues solely reside, is white, gray, or reddish, and of considerable thickness; the wood and pith are white. It has a glutinous bitterish taste, and no smell. The commercial varieties are—1*st*, Honduras, composed of very long roots, often doubled in the bundles; 2*d*, Jamaica, distinguished by its red colour, and the presence of its radicles; 3*d*, Brazilian or Lisbon, without radicles, in bundles, and more dressed than the others; 4*th*, Caraccas, also much dressed. Sarsaparilla is celebrated for its use in chronic syphilitic, rheumatic, gouty, and cutaneous diseases; and about 140,000 lbs. are annually entered for home consumption.

SARSNET, a plain silken fabric, now chiefly employed for linings.

SASSAFRAS, a tree (*Lauras sassafras*) found in N. America, Jamaica, and Cochin-China, the root of which is imported for its use in medicine. It occurs in long branched pieces, spongy, of a rusty white colour, a smell resembling fennel, and a sweetish, aromatic, subacrid taste. It yields in distillation a fragrant essential oil, of a whitish-yellow colour, and so ponderous as to sink in water.

SATIN (Fr. *Satin*. Ger. *Atlass*. It. *Raso*. Por. *Setim*), a soft, closely woven, twilled, silken fabric, with a glossy surface. Figured satins are manufactured by means of the Jacquard machine, of the most beautiful textures and patterns. After being taken out of the loom they are dressed by being rolled on heated cylinders, which imparts to them the beautiful lustre for which they are distinguished. Chinese satins are esteemed for the quality they possess of being easily cleaned and bleached; but in other respects they are inferior to those manufactured in Europe. The finest satins have long been made in Spitalfields. [SILK MANUFACTURE.]

SATIN-WOOD, a cabinet-wood, well known for its glossy yellow shades. It occurs in logs of 2 feet wide, and 7 or 8 feet long; but is now little used.

SAUNDERS-RED, a heavy insipid dye-wood, the product of a useful timber tree (*Pterocarpus santalinus*), found in Malabar, Mysore, Timor, and Ceylon. It is imported occasionally in large billets, of a reddish colour. It communicates a deep red to alcohol, but gives no tinge to water.

SAWS (Fr. *Scies*. Ger. *Sägen*. It. *Seghe*. Por. *Serras*. Rus. *Pili*. Sp. *Sierras*), well-known instruments manufactured on a great scale at Sheffield, from whence they are sent to all parts of the world. [IRON MANUFACTURES.]

SAXONY, an inland German kingdom, lying between the Prussian and Austrian states. Area, 5759 sq. miles. Population in 1840, 1,706,276. Capital, Dresden; pop. 70,000. Government, a constitutional monarchy, with a senate and house of representatives.

The country is traversed by the Elbe, navigable throughout for barges. The S. frontier is mostly formed by the *Erzgebirge* or Ore Mountains, the undulations and ramifications of which extend over the greater part of the country; though leaving a level tract along the N. part of the kingdom. Every spot capable of yielding a return is cultivated; but, except her celebrated wool, no agricultural produce is exported, owing to the great density of the population, which is chiefly engaged in mining, manufactures, and commerce. The principal metals are silver and iron; with lead, bismuth, arsenic, antimony, cobalt, and manganese: coal also is worked near Dresden. Of manufacturing industry the most important branch is that of cotton, which, as well as the others, has greatly expanded of late years, owing partly to the extraordinary cheapness of labour which has attended the extension of potato cultivation, and partly to the markets of Prussia and other parts of Germany having been opened up to the manufacturers by the Zollverein, which has benefited Saxony beyond any other of its members. [PRUSSO-GERMAN CUSTOMS UNION.] Most kinds of cotton fabrics are now produced; printing works are on the increase; and the cotton hosiery now competes with that of England in the American markets. The chief other manufactures are those of linens and woollens; but almost every article of luxury or use is made in Saxony, which, in respect of industry and civilisation, is the most advanced of the German states.

Saxony being now, commercially, united to other states by the Zollverein, we can give few details regarding its individual trade. It consists mainly in exchanging its manufactures, mineral products, and wool, for corn, salt, raw cotton, yarn, silk, flax, hemp, paper, fish, tropical produce, and fancy goods. It centres chiefly in Leipzic, to the fairs of which immense quantities of foreign commodities are likewise brought for the supply of other parts of the Continent. Of these fairs there are three;—New Year's Fair, which begins January 1; Easter or Jubilate Fair, on the third Sunday after Easter; and Michaelmas Fair, on the Sunday after Michaelmas: the last two are the greatest. Besides merchants from all parts of Europe, these fairs are frequented by all the German booksellers,—Leipzic, after London and Paris, being the chief literary mart of the world.

Measures and Weights.—The ell = 22·30 Imp. inches, and 100 ells = 61·96 Imp. yards. The Saxon or police mile of 2000 ruthes = 9914 Imp. yards. The morgen or acre of 300 square perches = 1 Imp. acre, 1 rood, 18 poles. The eimer, liquid measure, of 72 kannes, = 14·84 Imp. gallons; the ahm is 2, the oxhoft 3, the fass 5, and the fuder 12 eimers. The corn scheffel = 2·859 Imp. bushels; and the wispel of 2 malters, or 24 scheffels, = 8·58 Imp. quarters; the last of wheat or rye contains 6 wispels; the last of barley or oats, 2 wispels. The centner of 110 lbs. = 113·23 lbs. avoirdupois. The mark = 3602½ troy grains.

The preceding are the Dresden standards, which are now general throughout the kingdom.

Money.—The integer of account since January 1, 1841, has been the Prussian thaler or dollar of 30 new groschen = 2s. 10½d.

Finances.—The budget (1840-1842) gave the receipts at 5,500,297 dollars; and the expenses at 5,424,755 dollars. The debt in 1839 was 11,250,000 dollars. [GERMANY.]

SCAMMONY (Arab. *Sukmoonia*. Fr. *Scammonée*. It. *Scammonea*), a medicinal resin, resembling jalap, is the inspissated juice of the root of a plant (*Convolvulus scammonia*) indigenous to Syria. Three kinds occur,—Aleppo, the best, in spongy masses, of a glossy dark ash colour, peculiar heavy odour, bitter acrid taste, friable, and readily converted into a light gray powder; Smyrna, secondary; and Antioch, of very low quality. Nearly 7000 lbs. are annually consumed in the U. K.

SCANTLING, a general name for small timbers, such as the quartering for a partition, rafters, purlins, or pole-plates in a roof. All quartering or squared timber under five inches square is called scantling. The same term is used in carpentry, to express the transverse dimensions of a piece of timber; and in masonry, to designate the size of stones, in length, breadth, and thickness.

SCHEFFEL, a German corn-measure, varying greatly in different places.

SCHOONER, a vessel generally with two masts, and having all her lower sails fore and aft ones, *i. e.* in their usual position, in vertical planes passing through the keel: it has small or no topsails.

SCRIP. [FUNDS.]

SCUDO, a coin and money of account in Rome, Sicily, and Malta.

SCULPTURES. By the act 54 Geo. III. c. 56, copyright is constituted in sculpture, in so far as respects publication by casts. It exists during fourteen years from the first publication; and, at the end of that time, for another similar period if the artist be alive and have not disposed of his right. The name of the proprietor and the date must be marked on each cast or copy before publication. The act 6 Geo. IV. c. 107, prohibits the importation of any sculptures first made in the United Kingdom.

SEAL, the name of a family of amphibious animals, one species of which, the common seal (*Phoca vitulina*), frequents the British shores, particularly the north-west of Scotland; though it is in the Arctic regions that they chiefly abound. The seal is gregarious, and is fond of reposing on ice-fields,—situations where the greatest numbers are killed, chiefly for the oil obtained from their fat or blubber, which is preferred to that of the whale; though the animal is also valued for its skin, which is used, both with the hair on and when tanned into leather, for a variety of purposes. The seal-fishing is chiefly prosecuted from Newfoundland, Nova Scotia, and the United States; but whalers always take out seal-clubs as part of their equipment, the animal being most readily despatched by a blow on the nose; and one ship has been known to obtain a cargo of from 4000 to 5000, yielding nearly 100 tuns oil. The gigantic walrus, belonging to the same class, is killed for its ivory tusks, as its carcass yields but a small proportion of oil; the chase of them, therefore, only constitutes a third-rate object in whaling voyages.

SEALING-WAX (Fr. *Cire à cacheter*. Ger. *Siegellack*) was anciently formed in England of bees-wax and resin; but since the introduction into European trade of shellac [Lac], the most adhesive of the gum-resins, the finer kinds have been principally composed of that material; adding camphor to make it ignite freely, and vermilion, lampblack, or some other colouring matter. Coarse wax consists chiefly of common rosin. And there are a variety of intermediate sorts, in which shellac and rosin are blended with colouring and other substances, according to the purposes intended. Spain and Holland were formerly distinguished for their sealing-wax; but it has long been manufactured in this country, principally in London and Edinburgh.

SEALS (Fr. *Cachets*. Ger. *Petschafte*. It. *Sigilli*. Por. & Sp. *Sellos*), for impressing letter-wax, and other soft substances, are usually formed of stone or metal, on which some device is engraved. The finest, composed of precious stones set in gold, are made in London and other towns. But immense quantities formed of stained glass, fixed in gilt copper, are manufactured, both for home consumption and exportation, at Birmingham,—the great seat of this kind of *bijouterie*.

SEAMEN, persons employed in navigating sea-going vessels. The laws for the regulation of those engaged in the British merchant-service were formerly the subject of numerous statutes, but in 1835 these were consolidated by 5 & 6 Wm. IV. c. 19, which also provided for forming and maintaining a Register of Seamen. An abstract of that act is given below. It includes regulations for the payment of their wages; but these do not deprive them of their lien on the ship, and other ordinary legal remedies. Their right to receive wages, however, depends, to a certain extent, on the successful termination of the voyage. It is said to be a general rule, that no wages are due where no freight is earned by the vessel, or that "freight is the mother of wages;" but the conclusion depends on the circumstances which have prevented freight from being earned. Where these have arisen from the acts or negligence of the owners or master, or of the persons with whom they have contracted for a cargo, the wages are not lost. Capture defeats the right of the seamen, which revives on recapture. Entire loss by shipwreck defeats the claim; but if any part of the cargo is saved, and freight earned by it, the seaman will have a claim for a proportional part of his wages; and it has been held in England, that mariners are entitled to wages from the proceeds of any parts of the vessel which their exertions are the means of preserving. (*Holt's Shipping and Navigation Laws*, 1826, p. 266-294. *Abbot on Merchant Ships and Seamen*, (6th Edition,) 540-598. *Bell's Commentaries*, vol. i. p. 509-519.)

Abstract of the Merchant Seamen's Act, 5 & 6 Wm. IV. c. 19 (July 30, 1835).

§ 1. After 31st July 1835, the following acts, 2&3 Anne, c. 6, 2 Geo. II. c. 36, 2 Geo. III. c. 31, 31 Geo. III. c. 39, 45 Geo. III. c. 81, 37 Geo. III. c. 73, 58 Geo. III. c. 38, 4 Geo. IV. c. 25, 3 & 4 Wm. IV. c. 88, and 59 Geo. III. c. 58, repealed.

§ 2. It is not lawful for any master of a vessel trading to parts beyond the seas, or of any British registered ship of the burden of 80 tons, to carry to sea any one of his crew (apprentices excepted), without an agreement in writing specifying his wages, his capacity, and the nature of the voyage, signed by the master and seaman at the place of shipment. The agreement must be distinctly read over to each seaman before he signs, by or in the presence of the person who attests his subscription.

§ 3. Except as after provided, every agreement must be in the form of schedule A of the act; and the owners and the master, or one of them, on reporting his ship's arrival, must deposit with the collector or comptroller of customs a copy of the agreement, attested by the master. In the cases of ships employed in fishing on the coasts, or regularly trading coastwise, and of ships making regular voyages to Jersey, Guernsey, Alderney, Sark, or Man, or to any port on the continent between the Elbe and Brest, the agreement must be in the form of schedule B; and an owner must, within 10 days after the expiration of every 6 months ending on the 30th June and the 31st December in each year, deposit with the collector or comptroller of the port to which the ship belongs a true copy of every agreement entered into with any part of the crew within the preceding 6 months, attested by his signature. All such copies are legal proof of the contents of the agreement, when produced in evidence on the part of any seaman.

§ 4. The penalty for not entering on the agreement is £10 for each mariner taken on board; that for not causing it to be read over, £5 for each; and that for not depositing a true copy with the collector or comptroller, £50.

§ 5. The agreement not to deprive seamen of their lien upon the ship, or other remedies they are now entitled to; nor is any covenant contrary to or inconsistent with this act, or any clause whereby a seaman shall consent to forego the right which the maritime law gives him to wages in the case of freight earned by ships subsequently lost, or containing any words to that effect, valid. Seamen are not bound to produce the agreement to sustain their claim.

§ 6. If a seaman who has signed an agreement fail to join, or refuse to proceed in the ship, or absent himself without leave, any justice near the place may, upon complaint, cause such seaman to be apprehended, and upon due proof, committed to gaol for a period not exceeding 30 days. But if the seaman, on being brought before the justice, consent to join the ship, the justice, at the request of the master, instead of committing him, may cause him to be conveyed on board, or to be delivered to the master, and also to award to the latter reasonable costs, not exceeding 40s., which may be deducted from the seaman's wages.

§ 7 Enacts a forfeiture for temporary absence from duty of 2 days' pay for every 24 hours of absence, and in a like proportion for any less period, or, at the option of the master, the expenses necessarily incurred in hiring a substitute. There is a like forfeiture if the seaman, "without sufficient cause, neglect to perform such his duty as is reasonably required of him by the master;" and if, after the ship's arrival at her port of delivery, and before her discharge, he quit the ship without a discharge or leave from the master, he forfeits 1 month's pay. But no such forfeitures are incurred unless the fact of the temporary absence, neglect of duty, or quitting the ship, be recorded in the log-book, with specification of the hour of the day, and the period of absence or neglect, the truth of which entry it is incumbent on the owner or master to substantiate by evidence.

§ 8 Describes the mode in which the forfeiture is to be ascertained when seamen contract by the voyage and not by the month.

§ 9. Every deserter forfeits all his clothes and effects on board, and all emoluments, provided the circumstances be entered in the log-book at the time, and certified by the signature of the master and mate, or other credible witness. Absence for any time within 24 hours of sailing, without permission, or for any period, however short, under circumstances plainly showing his intention not to return, is deemed desertion. If such desertion take place beyond seas, and the master be under the necessity of engaging a substitute at higher wages, the owner or master is entitled summarily to recover the increased amount from the deserter.

§ 10. Penalty for harbouring deserters, £10: and no debt (incurred after agreement) exceeding 5s. recoverable from a seaman till the voyage is completed; nor can seamen's effects be detained by lodging-house keepers under pretence of debt.

§ 11. Masters and owners must pay wages when demanded, as follows, viz. if the ship be employed coastwise, within 2 days after the termination of the agreement, or at the time of discharge, whichever first happen; and if the ship be employed in trading otherwise, at the latest within 3 days after cargo is delivered, or within 10 days after the discharge, whichever first; in either of which last-mentioned cases of payment being delayed, the seaman is at the time of discharge entitled to be paid on account one-fourth part of the balance due to him. Masters and owners, for neglect or refusal, forfeit to the seaman 2 days' pay for each day not exceeding 10 days of delay; for the recovery of which, the seaman has the same remedies as for the recovery of his wages. The clause does not extend to ships in the southern whale-fishery, or on voyages for which seamen are compensated by shares in the profits.

§ 12. Every payment of wages is valid notwithstanding any bill of sale or assignment by the seaman of such wages, or any attachment or incumbrance thereon; and no assignment or sale of wages made prior to the earning, and no power of attorney expressed to be irrevocable for the receipt of wages, is binding.

§ 13. Masters to give seamen certificates on their discharge, specifying the period of service and the time and place of discharge, under a penalty of £5.

§ 14. If after a seaman has been discharged 3 days, he be desirous of proceeding on another voyage, and so require immediate payment of his wages, any justice, on satisfactory proof that he would be prevented from employment by delay, may summon the master or owner, and order payment forthwith; penalty for default, £5.

§ 15. As to recovery of wages, in all cases not exceeding £20, a justice, upon complaint on oath, may summon the master or owner, and make such order for payment as shall appear just, and levy the amount by distress and sale of the goods and chattels of the party; and in case sufficient distress cannot be found, the justice may cause the amount to be levied on the ship, or the tackle and apparel thereof. If the ship be not within the jurisdiction of the justice, he may cause the party to be imprisoned till payment. The justice's decision is final.

§ 16. Costs of suit for recovery of wages not to be allowed, if sued for in the superior courts, when they might have been recovered before a justice.

§ 17. When the ship is sold at a foreign port, the crew (unless consenting to be there discharged) are to be sent home at the expense of the master or owners.

§ 18. Medicines to be kept on board, and seamen hurt in the service of the ship to be provided with surgical advice gratis.

§§ 19 & 20 Provide for the establishment of a General Register of merchant seamen, at the Custom-house, London.

§ 21. The master of every British ship trading abroad (except as mentioned below), besides keeping the book required by 4 & 5 Wm. IV. c. 52 (which provides for the support of sick and disabled seamen), must, on reporting his ship on her arrival, deliver to the collector or comptroller at the port, an account of all the crew who have belonged to the ship at any time during her absence.

§ 22. Within 21 days after the 30th June and the 31st December in each year, the owner of every ship employed in fishing or trading on the coasts, or making regular voyages to any port of Europe between the Elbe and Brest, must deposit with the collector or comptroller of the port to which the ship belongs, or with the registrar in London, an account of the voyages in which the ship has been engaged during the preceding half-year, setting forth the names of the several persons who have belonged to the ship.

§ 23. If a ship be lost or sold while absent from the United Kingdom, the account must be made out up to the period of loss or sale, and transmitted by an owner or the master to the registrar in London, so soon as possible after a loss, and within 12 calendar months after a sale.

§ 24. The accounts and returns are to be transmitted by the collectors and comptrollers from time to time to the registrar. Every owner or master refusing or neglecting to deliver a list or account, forfeits £25.

§ 25. Whenever a seaman, being abroad, dies elsewhere than on board ship, leaving effects, the British consul is required to take charge thereof, and dispose of them for the benefit of the next of kin; and in case no claim be made within 3 calendar months after the death, the consul, after abating expenses, is to remit the balance to the president and governors of the corporation "For the relief of disabled seamen, &c., in the merchant service," for the purposes provided by the 4 & 5 Wm. IV. c. 52. In case any seaman so dying leave on board any effects, which are not claimed within 1 month after the ship's return by the executor or administrator, the master is required to deposit the same or the proceeds in the same manner.

§§ 26 to 30 Regulate the sending to sea of parish boys and parish apprentices.

§ 31. The master of every ship of the burden of 80 tons and upwards, must have on board, at clearing out, one apprentice or more, in the following proportions to the tonnage, viz.:—Every ship of 80 tons and under 200, one apprentice at the least; every ship of 200 and under 400, two; every ship of 400 and under 500, three; every ship of 500 and under 700, four; and every ship of 700 and upwards, five at the least; all of whom, at the period of their being bound, shall have been under 17 years of age, and shall have been bound for 4 years at the least. If a master neglect to have on board the proper number, he forfeits £10 for each apprentice deficient.

§ 32. Apprentices exempt from contributions for hospitals.

§§ 33 and 34. Indentures and assignments of parish and other apprentices to be registered as therein mentioned. Apprentices may be employed in any ship of which their master is master or owner.

§ 35. Agreements, indentures, assignments, &c., under the act, are free of stamp-duty.

§ 36. Penalty on masters neglecting to register indentures, and for suffering apprentices to quit their service, £10.

§ 37. Any two or more justices, at or near the port of arrival, have authority to determine complaints between masters and apprentices.

§ 38. Common assaults on board merchant-ships may be summarily punished by two justices; and the fine shall be payable to the merchant-seamen's hospital or institution nearest to the port of adjudication.

§ 39. Masters entitled to receive the wages of apprentices entering into the navy; which they cannot do except with their master's consent.

§ 40. As mischief has arisen from seamen being left in foreign parts, masters forcing on shore or leaving behind any of the crew are subject to fine and imprisonment.

§§ 41 and 42. Seamen not to be discharged, nor left on the plea of desertion, at any colony, without the written sanction of a government-officer; nor at any other place abroad, without the sanction of the British consul or two respectable merchants.

§ 43. If any of the crew are left behind, the proof of sanction or authority, as above, is to be upon the master in the case of dispute.

§ 44. Seamen when allowed to be left behind, are to be paid their wages, a true account of which shall be delivered by the master to the functionary or merchants, as aforesaid, under a penalty of £25. If wages be paid by a draft on the owners, the functionary or merchants must testify, by certificate indorsed on the bill, that it is drawn according to this act for money due on account of wages of a seaman.

§ 45. Act not to prevent seamen from entering the navy; and no penalty can follow such entry. Agreements to the contrary void.

§ 46. Upon entry of seamen into the navy from merchant-ships, they shall be entitled to the immediate delivery up of their clothes, and payment of any wages that may be due, according to the regulations prescribed.

§ 47. The crown empowered to sue for the amount advanced for the relief of seamen left abroad. In any proceeding for that purpose, proof of the account furnished to the commissioners by any functionary or merchants as above, together with proof of payment by the navy department of the charges incurred, is sufficient evidence that such person was relieved and conveyed home at his majesty's expense. The court in which such proceeding is instituted is authorized to issue commissions for the examination of witnesses abroad.

§ 48. Every master, on his arrival at any foreign port where there is a British consul or vice-consul, must deliver to him the agreement with his crew, to be preserved during the ship's stay there, and to be returned to the master before his leaving the port, without any fee or charge; and every master, for refusal or neglect to deliver, forfeits £25.

§ 49. During the ship's stay at any foreign port, no seaman can be shipped except with the privity of the consul or vice-consul, indorsed or certified on the agreement, under a penalty of £25 for every seaman otherwise shipped.

§§ 50 and 51. Masters, when required, must produce agreements to officers of king's ships. Such officers may muster the crew; penalty on master for refusal, £25. Registrar and officers of customs may require production of the agreement and muster-roll, and muster the crew, under a penalty for refusal of £50.

§ 52. For the purposes of the act, every person having the charge or command of a ship is deemed the master, and every person (apprentices excepted) employed to serve in any capacity on board is deemed a seaman; and "ship," comprehends every vessel navigating on the sea, and the "owner," all to whom the ship belongs, and all steam and other vessels employed in carrying passengers or goods, are deemed trading-ships.

§ 53. Penalties and forfeitures, for the recovery whereof no specific mode is provided, may be recovered, with costs, as follows, viz.:—All penalties not exceeding £20, by information and summary proceeding before any one or more justices, residing near the place where the offence is committed or where the offender may be, who may levy the amount by distress and sale, or commitment for non-payment. All penalties exceeding £20 may be recovered, with costs, in any court of record at Westminster, Edinburgh, or Dublin, or in the colonies, at the suit of the chief law-officer of the crown. All penalties, for which no specific application is provided, are to be applied as follows, viz.:—One moiety to the informer, and the residue to be divided between Greenwich Hospital and the Merchant Seamen's Hospital or Institution at the port to which the ship may belong; and if there be none such, the whole to Greenwich Hospital. The court may mitigate any penalty, but not below one-half. All proceedings must be commenced within two years next after the commission of the offence, if the same shall have been committed at or beyond the Cape of Good Hope or Cape Horn, or within one year if committed on the European side of those limits, or within six calendar months after the return of the offender or the complaining party to the United Kingdom.

§ 54. The act does not extend to any ship registered in or belonging to any British colony having a legislative assembly, or to the crew of such ship, while she is within the precincts of the colony.

SEAWORTHINESS of a vessel, in the law of marine insurance, is an implied warranty on the part of the insured, or one of those conditions of the contract, the want of compliance with which renders it null. It is generally provided in the policy that the vessel shall be "tight, staunch, and strong, properly manned, provided with all necessary stores, and in all respects fit for the intended voyage." The seaworthiness must be adapted to the nature of the service, for what will suit a coasting voyage will not enable a vessel to proceed to India. Seaworthiness includes the having a competent master and a sufficient crew, with a proper equipment of masts, sails, and anchors. If the vessel sail to a port where a pilot is necessary, the master must obtain one, or use every effort to do so; and having employed one, must not dismiss him within the fair way. It is a general rule, that it is of no consequence whether the owners or the master *know* of defects affecting seaworthiness or not. In one case, of which no very distinct report has been preserved (Mills *v.* Roebuck in Exch., see *Park*, 460; *Marshall*, 154), there was an apparent divergence from these rules; and so far as can be collected, the grounds appear to have been, that from the place of her build the underwriters had to expect inherent defects in the vessel's construction; and that they had reason to know the progress of these defects from the representations made when the slip was signed. (*Park on Insurance*, 8th edit., 458-496. *Marshall on Insurance*, 146-161.) [INSURANCE.]

SEER, an Indian weight. The E. I. C.'s new seer of 80 tolas = 2·057 lbs. avoird.

SEIGNORAGE, the profit derived from issuing coins at a rate above their intrinsic value.

SENNA (Fr. *Séné*. Ger. *Sennablater*. It. *Senna*), a well-known medicine, composed of the leaflets and occasionally of the leaf-stalks and pods of several species of *Cassia*, cultivated in Arabia, Syria, and Egypt. About four-fifths of that brought to the English market is Arabian or Mecca senna, commonly called East India senna, from being shipped from Indian ports. It is the product of *C. lanceolata*; leaflets very narrow and acute. Other kinds are imported from the Levant; and at second-hand from Italy, under the designations of Alexandrian, Tinnivelly, Aleppo, and Tripoli senna. The Alexandrian (*C. acutifolia*) is the most valuable; but it is often adulterated. About 200,000 lbs. are annually entered for consumption in the United Kingdom.

SEQUESTRATION—*Mercantile*, in the law of Scotland, is the process by which the effects of a bankrupt trader are realized and divided among his creditors, as by the process of bankruptcy in England.

The law on the subject is contained in the Statute 2 & 3 Vict. c. 41, of which what follows is an abridgment:—

Persons who may be sequestrated.—Any debtor "who is, or has been, a merchant, trader, manufacturer, banker, broker, warehouseman, wharfinger, underwriter, artificer, packer, builder, carpenter, shipwright, innkeeper, hotel-keeper, stable-keeper, coach-contractor, cattle-dealer, grain-dealer, coal-dealer, fish-dealer, lime-burner, dyer, printer, bleacher, fuller, calenderer, and generally any debtor who seeks, or has sought his living, or a material part thereof, for himself, or in partnership with another, or as agent or factor for others, by using the trade of merchandise, by way of bargain, exchange, barter, commission or consignment, or by buying and selling, or by buying and letting for hire, or by the workmanship or manufacture of goods or commodities." No one can be sequestrated as "a holder of stock in any of the public or national funds, or of India stock, or as a partner in any company incorporated or established by act of parliament, or by charter, or as a landholder or farmer, unless such landholder or farmer be *bona fide* a dealer in cattle not the produce of, nor grazed, nor worked on his farm, or unless he be a dealer in grain not the produce thereof" (§ 5). The debtor (unless he consent) must be bankrupt, must have carried on business within Scotland, and must have also within a year before the date of presenting the petition resided, or had a dwelling-house, or place of business in Scotland. Bankruptcy is not necessary where the debtor has been in the sanctuary for 60 days, either continuously or not, within the space of 12 months. A *company* may be sequestrated, provided (unless the company consent) one of the partners has been made bankrupt for a company debt, and the company have carried on business in Scotland, and a partner have had a dwelling-house or the company a place of business there within a year and day before the presentation of the petition. Sequestration may be awarded of the property of "*any* deceased debtor who at the time of his death resided, or had a dwelling-house, or carried on business in Scotland, and was at that time owner of heritable or moveable estates in Scotland;" but not until the expiry of six months after his death, unless he had granted a mandate to apply for sequestration, or was bankrupt when he died, or had remained in sanctuary for 60 days, at some time or other within the 12 months preceding his death, or unless his successor shall concur in the petition or renounce the succession (§ 4).

Application, Awarding, and Recall.—Sequestration may be awarded on the application of the debtor, with concurrence of creditors, or at the instance of creditors alone. Those creditors entitled to petition, or to concur, are—any one creditor whose debt amounts to £50, any two whose debts together amount to £70, or any three or more whose debts together amount to £100. The debts need not be liquid, but they must not be contingent. Application is made by petition to the lord ordinary, signed by the petitioner or his counsel. In the case of a petition without consent, it must be presented within four months after the bankruptcy, or, in case of retiring to the sanctuary, within four months after expiration of the 60 days. The petitioning or concurring creditor produces with it his oath, accounts, and vouchers. There are provisions for the petitioning creditor (in the case either of the debtor's decease or of his not concurring), specifying the circumstances which bring him within the range of the act (§ 12). Where the application is with consent of the debtor, the lord ordinary awards sequestration, and appoints a meeting to be held, not earlier than eight or later than 14 days from the deliverance, to elect an interim-factor; and another meeting not less than four weeks and not more than six weeks from the date of the deliverance, at the same place, to elect a trustee or trustees in succession, and commissioners. A remit is made to the sheriff, and protection is granted to the debtor against arrest or imprisonment for civil debt until the meeting for election of trustee. There are special provisions for giving notice to successors, in the case of a debtor deceased. Where the petition is without the debtor's consent, there are provisions for his being cited for his interest, and for the recovery of evidence as to the bankruptcy, &c. If he do not appear, or do not instantly pay the debt, or produce evidence of payment, to the creditors appearing against him, sequestration is awarded, meetings are appointed, and protection is granted as above. The party applying for sequestration, before expiry of the second lawful day after the first deliverance, must present an abbreviate, to be recorded in the register of inhibitions. The record has the effect of an inhibition, and of a citation in an adjudication, and so of tying up the bankrupt's property, till it is disposed of in course of law. The party must also insert a notice, within four days from the date of the deliverance, in the Edinburgh, and within eight days in the London Gazette. The awarding of sequestration has the effect of bankruptcy from the date of the first deliverance, without prejudice to any previous bankruptcy. The sequestration is not liable to review, but it may be recalled, on a petition to the lord ordinary, within 40 days. There is a greater latitude in the case of the successor of a deceased debtor edictally cited. Nine-tenths of the creditors in number and value may at *any time* apply for recall, notice being given, in terms of the act, to all concerned.

The Creditors as a Body.—To entitle a creditor to petition, concur, vote, or draw a dividend, he must produce an oath before a sheriff, magistrate, or justice, to the verity of his debt, stating in his oath what other persons (if any) are, besides the bankrupt, liable for any part of the debt, and any security he may hold over the estate of the bankrupt or of other obligants, and stating that he has no other obligants or securities besides those specified. Where he holds no other person besides the bankrupt so bound, and no security, he must depone to that effect. A corporation may make affidavit by its acting officer. A creditor abroad may make affidavit, subject to certain regulations, in the country where he resides, or his agent may make an oath of credulity. The agent for a creditor under age may make such oath of credulity. A creditor having once qualified is entitled to vote, however unsound his claim may be. The creditor must produce, with his oath, such accounts and vouchers as may be necessary to prove his debt. If he have not the vouchers, on stating on his oath the reasons why he is not possessed of them, and whose hands he believes them to be in, a dividend will be set apart till he establish his claim. If a creditor, who has petitioned, concurred, or opposed, withdraw, or become bankrupt, or die, another may be sisted in his place, and may follow out proceedings. A mandatory of a creditor, exhibiting a written mandate, may vote in his stead. Interest, up to the date of the sequestration, may be accumulated on claims, but not farther interest. If there is a discount by the usage of trade, or if the term of payment be not arrived, a corresponding deduction must be made of discount or interest. If a creditor hold a security, he must deduct it from his valuation; he can vote only on the balance, except in questions as to the disposal or management of the estate subject to the security, on which he can vote to the whole amount. Where a creditor has an obligant bound with, but liable in relief to the bankrupt, or holds any security from an obligant liable in relief to the bankrupt, or any security from which the bankrupt has a right of relief, he must put a specified value on the obligation, in his oath, and is entitled to vote only on the balance. A creditor of a company is not bound to deduct the dividend he may be entitled to from the estate of the partners. Before voting on a partner's estate, however, he must put a value on his claim against the company, and on his claim against the other partners. While a debt is contingent, the creditor cannot vote except to the extent of the value that may be put on it by the trustee or the sheriff.

Meetings, Election of Trustee, Factor, and Commissioners.—The trustee or any commissioner may at any time call a meeting, and the trustee is bound to call a meeting whenever he is required by one-fourth in value of the creditors ranked. Meetings appointed by the act are held on notice of the day, hour, place, and purpose, advertised 14 days before in the Edinburgh Gazette (except in case of the meeting for electing an interim-factor), and any meeting may be adjourned to the following day. No notification is to be sent to creditors who direct none to be sent, or to creditors for less than £20, unless they give directions in writing to send them notice. Unless where there is an express provision otherwise, questions at meetings of creditors are settled by the majority in value of those present; "and where, for the purpose of voting, the creditors are required to be counted in number, no creditor whose debt is under £20 shall be reckoned in number, but his debt shall be computed in value" (§ 44). Meetings may be adjourned, if not carried beyond the times fixed by the act.

At the meeting for the election of interim-factor, if two or more creditors give notice, the sheriff or sheriff-substitute must attend the meeting, and adjourned meetings, and preside. The sheriff-clerk must attend, to mark the oaths and productions with his initials, and write the minutes. If no sheriff is present, the creditors elect a preses, and if no sheriff-clerk be present, a clerk, both proceeding as above. In either case, those who have been entered in the minutes as qualified, proceed to elect an interim-factor or trustee, as the case may be. No person related to, or in business with the bankrupt, or holding an interest adverse to that of the creditors, is eligible as trustee. If the sheriff be present, and there be no competition, and no objections stated, he declares the person chosen to be interim-factor or trustee as the case may be. If there be objections to votes or candidates, they must be stated at the meeting, when the sheriff may either forthwith decide on them, or reserve them for consideration. If necessary, he may take note of objections and answers, and within four days after the meeting, decide on hearing parties *vivâ voce*, stating the grounds of his decision in a note. An ordinary preses, however, must report whether there is opposition or not, the sheriff declaring the result, or deciding on objections. The creditors at these meetings fix a sum for which the interim-factor or trustee is to find security, and decide on the sufficiency of the caution offered. Against the sheriff's declaration of the election of a trustee an appeal may be taken during session to the Inner-house of the Court of Session, or during vacation to the lord ordinary, on notice in writing being lodged with the sheriff-clerk within two days after the decision. The costs must be paid by the unsuccessful party. An appeal does not stop proceedings in the sequestration. At the meeting for electing a trustee, commissioners are elected, and the interim-factor's remuneration may be fixed in the same manner. The commissioners must be creditors or mandatories. They are not bound to find security. The sheriff decides who are duly elected.

Interim-Factor or Sheriff-Clerk.—If the creditors fail to elect an interim-factor, or the nomination otherwise fail, his duties devolve on the sheriff-clerk. They are as follows: He must immediately take the steps necessary for the preservation of the estate until the meeting for election of trustee. He must "take possession of and recover the bankrupt's estate, and his title-deeds, books, bills, vouchers, and all other documents whatsoever, so far as then known, and make an inventory thereof" (§ 51), a copy of which he must transmit to the bill-chamber. He must lodge all monies in bank in the same manner as the trustee, and pay the expenses of the petitioning or concurring creditor out of the first funds realized. He must keep a sederunt-book. At the meeting to elect a trustee he must exhibit the sederunt-book, "and also an account of his intromissions and disbursements, and if required by any creditor, the books of the bankrupt, with the title-deeds, bills, vouchers, and other documents, conform to inventory;" and if the meeting be satisfied, they are to fix his remuneration, to be paid with his advances out of the funds in his hands. If he be dissatisfied with the sums allowed, the amount is to be determined by the sheriff.

Commissioners.—A majority form a quorum. "The commissioners shall superintend the proceedings of the trustee, concur with him in submissions and transactions, give their advice and assistance relative to the management of the estate, examine the acts and intromissions of the trustee, audit his accounts, decide as to paying or postponing payment of a dividend, fix his remuneration, and may assemble at any time to ascertain the situation of the bankrupt estate; and any one of them may make such report as he may think proper to a general meeting of the creditors" (§ 57).

Trustee.—"The trustee shall manage, realize, and recover the estate belonging to the bankrupt, wherever situated, and convert the same into money, according to the directions given by the creditors at any meeting, and if no such directions are given, he shall do so with the advice of the commissioners; and he, as well as the interim-factor or sheriff-clerk acting as factor, shall lodge all money which he may receive in such bank as four-fifths of the creditors in number and value at any general meeting shall appoint" (§ 61); and failing such appointment, in one of the chartered banks. The bank must annually balance the account, and accumulate the interest with the principal sum, being liable to account as if the money had been so accumulated. If the interim-factor, or trustee, keep in his hands more than £50 for more than 10 days, he must pay at the rate of 20 per cent. per annum on the excess, for such time as it may be in his hands beyond the 10 days; and unless the money has been kept from innocent causes, he will be dismissed, on petition to the lord ordinary. The trustee must keep a sederunt-book, entering minutes of creditors and of the commissioners, states of accounts, reports, and other proceedings. He must send an account to the bill-chamber before each dividend. Where a document is confidential, the trustee is not bound to insert it in the sederunt-book, or exhibit it to any one except the commissioners. Within 8 days after confirmation, the trustee applies to the sheriff to name a day for the bankrupt's public examination. On the warrant being granted, the trustee intimates in the Edinburgh Gazette his own election, and the time and place of the examination. He must intimate a day and hour for a meeting of the creditors, which must be not less than 14, nor more than 21 days after the day of examination, or (in the case of a deceased debtor) after the trustee's confirmation. Within 14 days after the examination the trustee must prepare a report as to the position of the estate, and an estimate of what it may produce, to be presented to the meeting, where he must be prepared to give all explanations. A majority in number and value at any meeting called through the Edinburgh Gazette, at least 14 days previously, by advertisement, specifying the purpose of the meeting, may remove the trustee or accept of his resignation. One-fourth of the creditors in value may apply to the lord ordinary for removal, showing cause. There are provisions to meet the resignation, death, or absence of the trustee. On the expiration of six months from the date of the sequestration, the trustee must make up a state of the whole estate, of the funds recovered, and of the funds outstanding (stating why they have not been recovered), "and of his intromissions, and generally of his management." The commissioners, at their meeting within 14 days after the expiration of the six months, examine the state, and audit the trustee's accounts, and declare whether any and what dividend is to be made. Before a composition is approved of, the trustee's accounts must be audited by the commissioners, and the balance due to him fixed, and paid or provided for. There are provisions for the registration of sequestrations; and to these the trustee must attend. After a final division, the trustee calls a meeting on 21 days' notice, by advertisement and letters, to consider his application for discharge. On his producing his vouchers, the creditors may declare their opinion of his conduct, and he may apply to the lord ordinary or the sheriff for exoneration and discharge. Before his discharge he must transmit the sederunt-book to the bill-chamber clerks, who will intimate to him the bank in which unclaimed dividends are to be lodged.

The Bankrupt's Liberation, Protection, and Discharge.—The lord ordinary may, on the bankrupt's application, grant warrant of liberation, after hearing objections. If the application be refused, the bankrupt may petition a second time with consent of the trustee and commissioners. At the meeting for election of the trustee, and at the meeting after the examination, or at any meeting called for the purpose, a majority in number and value may authorize the trustee to apply to the sheriff for a renewal of the personal protection.

Allowance.—Four-fifths in value of the creditors at such a meeting, may vote an allowance to the bankrupt, until the payment of the second dividend. It is not to exceed £3, 3s. per week.

State of Affairs.—The bankrupt must, before the time for the election of trustee, make up, subscribe, and deliver to the interim-factor, a state of his affairs, "specifying his whole estate, wherever situated, the estates in expectancy, or to which he may have an eventual right, the names and designations of his creditors and debtors, and the debts due by and to him, and a rental of his heritable subjects" (§ 52). He must give every information and assistance necessary to enable the factor or trustee to execute his duty; and if he fail to do so, or to grant any requisite deed, application may be made to the sheriff to compel him. There are provisions for bringing the bankrupt up for examination, or where necessary for taking the examination by commission; and likewise for enabling the trustee, where he finds it necessary, to procure the judicial examination of the bankrupt's wife and family, clerks, servants, and law-agent. They must answer all lawful questions relating to the affairs of the bankrupt; and there are provisions for compelling them to answer, and for enforcing production of books and vouchers. A *latent partner*, who does not reveal himself by the time of the examination, forfeits the privileges of the act, unless he prove that the concealment was occasioned by innocent mistake. There is an oath (or affirmation, as the case may be) which the bankrupt must take and subscribe in reference to the state of his affairs. In case of fraud, the trustee may be authorized to prosecute the bankrupt.

Composition by Bankrupt.—See COMPOSITION CONTRACT.

Discharge.—If every qualified creditor concur, the bankrupt may petition the lord ordinary or sheriff for a discharge at any time after the meeting following his examination. He may petition eight months after the date of the sequestration, if a majority in number and four-fifths in value concur. Twenty-one days are allowed for opponents to appear. When found entitled to his discharge, the bankrupt must make a declaration, or if required an oath, that he has made a full and fair surrender, and has not granted or promised any preference or security, or made or promised any payment, or entered into any secret or collusive agreement or transaction, to obtain the concurrence of any creditor to his discharge. The discharge, when granted, operates in any part of the British dominions as an acquittance to the bankrupt. An entry of it is made in the register of sequestrations. If the bankrupt be concerned in, or cognizant of any collusive preference to a creditor, he forfeits his title to a discharge; and the discharge, if it have been granted either on or without an offer of composition, may be annulled on a petition by the trustee, or any creditor, to the lord ordinary. If the bankrupt do not notify to the trustee any property that may fall to him before his discharge, he forfeits all the benefits of the act. Any surplus after payment of the debts, interest, and expenses of procedure, is payable to the bankrupt or his representatives.

The Estate.—By the confirmation the moveable and real property is held to vest in the trustee from the date of the first deliverance, subject to preferable securities. Where by the law of the place a conveyance requires registration, the confirmation must be registered. No purchase of such property out of Scotland for a valuable consideration, prior to the registration, and in the purchaser's ignorance of the sequestration, is invalidated. Property falling to the bankrupt before his discharge, vests as at the date of its acquisition. All preferences and deeds granted by the bankrupt during the sequestration, without consent of the interim-factor or trustee, are void. *Bona fide* purchasers, however, are secured, and so are debtors paying their debts to the bankrupt in ignorance of the sequestration. Heritable rights on which infeftment may follow are, in questions under the act, to be held of the date of the registration of the sasine; and sales, assignations, and other conveyances which do not require infeftment, but require delivery or intimation to complete them, are held to be of the date of the act so required to complete them. A person claiming any right or subject improperly included in the sequestration, may recover it on petition to the lord ordinary. There are provisions for making the sequestration equivalent to the usual diligences for attaching property, and for equalizing preferences, in the case of a deceased debtor, when they have not been completed 60 days before his death. The bankrupt, if required, must grant any deed necessary for recovering his estate, and feudally vesting it in the trustee. A trustee may complete feudal titles in his own person, and superiors must enter him. The trustee may validly grant conveyances. There are provisions for compelling a transference to the trustee, where an heir has served to the deceased bankrupt's property. The trustee and commissioners, within two months after a creditor has voted on an oath, in which he has deducted a security, as also the majority of the creditors (the creditor with the security not being counted) at the meeting where such creditor has voted, may require him to assign his security to the trustee, on payment of the value he has set on it, with 20 per cent. additional. The creditor may correct his value at any time before he is called on so to assign.

Disposal of the Property, and Questions with Creditors having a Right to Sell.—At the meeting after the examination, or at a meeting called for the purpose, the creditors may give directions for the recovery, management, and disposal of the estate. Where there is heritable property, they may determine whether it is to be disposed of by voluntary public sale, or to be brought to judicial sale. If the creditors have resolved on the manner in which such property is to be disposed of, before a creditor having a power to sell has commenced proceedings, or while he is unduly delaying a sale of heritable property, the trustee grants a title, subject to real securities. No expenses connected with the sequestration or sale are payable out of such part of the price as may be necessary to discharge the preferable securities; and no preferable heritable creditor is liable for any such expense unless he have consented to the sale, in which case he is liable for the expense of the sale. A creditor may purchase any estate sold under the act, but the interim-factor, trustee, and commissioners, may not purchase.

Declaration of Dividend and Ranking.—The commissioners at their meeting within 14 days after expiry of six months from the date of the sequestration, declare what amount may be distributed in dividends; and within the same 14 days, if a dividend is to be made, the trustee must examine the oaths and grounds of debt, and in writing reject or admit them, or require farther evidence, stating the reasons where he rejects. He then makes up two lists; one, of the creditors he ranks as entitled to draw dividends, specifying their debts, with interest to the date of the sequestration, and distinguishing the ordinary from the preferable creditors. The other list is of the creditors whose claims he has partially or wholly rejected. Notice is sent to rejected creditors, who may appeal to the lord ordinary or sheriff. A creditor who holds a security, before being ranked, must put a value upon it, deduct it, and specify the balance, on which alone he can rank. The trustee is entitled either to demand an assignation to the security on paying the value put upon it, or to let the creditor take the benefit of it. In the case of the claim on a partner for a company debt, the dividend from the company must be deducted. An annuity creditor ranks for the value put on his annuity, and if there be a cautioner for the annuity he is discharged, on payment of the estimated value and arrears. Co-obligants with the bankrupt are not discharged by the creditor consenting to the steps of the sequestration; but if the co-obligant pay the debt, the creditor must assign it to him, and he may rank for it.

Payment of Dividends.—Where there are sufficient funds realized, the dividends are respectively payable on the first lawful day after the expiration of the following periods, viz. the first, of 8 months from the date of the sequestration; the second, of 12 months from the same date; and future dividends after the expiration of 4 months from the date of the payment of the immediately preceding dividend, until the whole funds be distributed. To entitle a creditor to payment of the first, or of the second, or of any other dividend, he must produce his oath, &c., at least 2 months before the time of payment. A creditor who has not been in time for the first dividend is entitled to a preference on the subsequent dividends. After the expiry of the 14 days, within which (on the expiry of the six months from the date of the sequestration) the trustee has to make up his state and rank the creditors, he must advertise in the Edinburgh Gazette the time and place for payment; and on or before the first lawful day after the 14 days, he must notify the same to each creditor by post, with the amount of the claim and dividend. Before the expiration of eight months from the sequestration, the trustee has to make up a scheme of division among those creditors whose claims have been sustained, or who have appealed. The scheme must be patent to all concerned. The like proceedings take place at intervals of four months till the trust is wound up. Dividends reserved on account of an unaccomplished contingency, or appeal, are to be lodged in bank. The commissioners may postpone a dividend till the period for making the next one, directing the trustee to give notice in the Edinburgh Gazette.

Winding up and Miscellaneous.—After 12 months from the commencement, if it seem expedient to sell the remaining property, and outstanding claims, a day may be fixed for a meeting for the purpose, to be called by advertisement and special notice. On three-fourths in value of the creditors assembled consenting, the sale may take place by auction. Unclaimed dividends being deposited in bank at the direction of the clerks of the bills, a register is kept of them. The parties entitled, on applying to the lord ordinary, obtain payment of such unclaimed dividends, but without interest, which is accumulated in a separate fund, at the disposal of parliament. There are provisions for punishing all frauds and collusive preferences, and for nullifying the advantage sought to be obtained by them. The resolutions of meetings, and proceedings of the trustee, may be appealed against to the lord ordinary or the sheriff,—the former within 14, the latter within 30 days. Persons, by merely claiming and voting, are not liable to the agent's expenses. He has his recourse merely against the estate, or the interim-factor or trustee who may have employed him. [Affidavit. Bankruptcy. Composition Contract.]

SEQUIN, an Italian gold coin = 9s. 5d.; also a Turkish money.

SERGE, a quilted woollen cloth, made in Devonshire and other parts of England.

SERPENTINE, a mineral, one species of which, called noble serpentine, green and translucent, is valued as an ornamental stone.

SERON, a kind of package, formed of pieces of wood fastened with hides.

SHAD (*Alosa finta*, Cuv.), a fish allied to the herring, found in the Severn and in the Thames, where it is in season in July; its flesh is unpalatably dry.

SHADDOCKS, a large species of Citrus (*C. decumana*), commonly cultivated in both the East and West Indies for the sake of the delicate subacid juicy pulp in which they abound. When at their greatest size they are called Pompoleons; the smallest form the Forbidden Fruit of the English markets.

SHAGREEN (Fr. *Chagrin*. Ger. *Schagrin*. Rus. *Schagrim*), a sort of hard grained leather, prepared in a peculiar manner from the skin of horses and other animals; the part preferred being the piece above the tail. It is made in Poland; Russia, especially at Astracan; and in various parts of the Levant. The best is said to be imported from Constantinople. It is employed in the manufacture of small cases and boxes.

SHALLOONS, loosely made woollen stuffs, commonly used for lining coats.

SHAMMY or CHAMOIS LEATHER, is properly the dressed skin of the chamois goat; but common goat, kid, or sheep skin is generally substituted for it.

SHARKS' FINS are exported in large quantities from India to China, where they are esteemed a very strengthening food. They are chiefly collected in the Arabian and Persian Gulfs; but they are likewise prepared on the coasts of India. They should be chosen large and properly cured. Those under nine inches long reckon only as one-half the value of the others.

SHAWLS (Fr. *Chals*, *Chales*. Ger. *Schalen*. It. *Shavali*. Por. *Chales*. Sp. *Schavalos*), well-known articles of dress, made of silk, wool, or more commonly of silk and wool mixed. The chief seats of the shawl manufacture in this country are Paisley and Norwich. The competition of the French, after the opening of the silk-trade in 1826, produced improvements in style and pattern, which led to a signal extension of the British manufacture. And though our native patterns are scarcely yet equal to the French as respects the contrast of colours, they are yearly improving, owing to the increased attention now bestowed on the arts of design. But both British and French shawls are inferior to those made in the Valley of Cashmere, from the wool of a species of goat found on the cold mountains of Thibet; the exquisite fabric of which cannot be successfully imitated by foreigners. The European manufacturer may impart much of the beauty and copy with success the pattern; but his web possesses none of the delicacy, softness, and warmth of the original. Nor are the weavers of the adjoining countries more successful; the shawls of Lahore and Delhi, though woven by natives of the valley, and with the same materials, are wanting in the fineness of those prepared in Cashmere. If implicit reliance is to be placed in the people, the shawl derives much of its beauty from the water in which the wool is dyed, and which is peculiar to their country. Notwithstanding the reputation of these shawls, however, the number of looms employed in their manufacture has greatly fallen off in modern times. According to a statement copied by Mr Martin, in his work on the British Colonies, from the Delhi Gazette, the number at present is estimated at 6000, and the average value of shawls annually exported from Cashmere about £180,000. The Cashmere shawls are generally sold in pairs: they usually consist of three sizes, two of which, the long and the small square, are those commonly brought to this country; the other, long, very narrow, and chiefly of a black colour, is worn by many Asiatics as a girdle. The shawls for the British market are mostly selected with coloured grounds, and handsome rich borders and flowers. They are imported chiefly from Bombay and Surat.

At present, owing to the caprice of fashion, shawls are much less worn in this country than formerly; and great distress has in consequence been produced in Paisley and other places dependent on their manufacture; but this depression is we hope but temporary.

SHEEP (Fr. *Brebis*, *Mouton*. Ger. *Schafe*), a ruminating animal, chiefly distinguished for its fur or hair, which is of two kinds,—one hard and close, and the other woolly; the latter preponderating in proportion as the animal is domesticated. In Europe and other parts of the world the sheep is carefully tended for its wool, which is the chief material of the clothing of all northern nations. But every part is fitted for use. The flesh, heart, liver, kidneys, and spleen, as food; the intestines are made into strings for musical instruments; the skin into leather and parchment; the bones into handles, spoons, and toys; the internal and loose fat makes tallow; their milk may be made into cheese; and their dung is a rich manure. The sheep, besides, can be reared in situations unfitted for any other quadruped.

The sheep belongs, according to Cuvier, to the tribe *Capridæ*, and genus *Ovis*. After 5 months gestation the lamb is dropped, usually in this country in March or April; and May and June are the *sheep-shearing* months, as the animal sheds the superfluous wool on the approach of warm weather. It lives naturally for about 15 years; but from 1½ to 2 years is the common period at which it is fattened for food; and even breeding stock are not usually kept beyond five or six years. Age is reckoned not from birth but from the first shearing. The male is called a *ram* or *tup*: after weaning he is said to be a *hog* or *hogget*, a *lamb-hog*, or *tup-hog*; and if castrated, a *wether-hog*. After shearing, when fully one year old, he is a *shear-hog* or *shearling*, a *dinmont*, a *tup*, or *shearing-wether*; and after the second shearing a *two-shear ram* or *tup*. The female is a *ewe* or *gimmer lamb* until weaned; then a *gimmer* or *ewe hog*; after being shorn a *shearing ewe* or *gimmer*; after that a *two-shear ewe*; and so on.

England has from a remote period been celebrated for her sheep,—on the numerous breeds of which many improvements have of late been effected, chiefly with the view of increasing the profitable return from the carcass; as the wool has become generally longer, heavier, and coarser than formerly. Their numbers have likewise been increased by means of the artificial or turnip husbandry. British sheep are usually classed into *short-woolled* and *long-woolled*; the leading and most improved breed of the former being the *South-Down*, chiefly occupying the hills of Sussex; and of the latter, the new *Leicester*. The South-Down is well adapted for the chalky hills of the south, where this breed is chiefly diffused. Its fleece, short and fine, weighs from 3 to 4 lbs.; and its mutton, fine in flavour and grain, weighs, in two-year old wethers, about 18 lbs. a-quarter. The Leicester is not adapted for poor soils, nor for travelling to seek its food: its fleece averages from 6 to 7 lbs.; and its mutton, fat, fine in grain, and of superior flavour, weighs, in two-year old wethers, from 20 to 30 lbs. the quarter: on fair keep the Leicester will yield a greater quantity of meat for the same food than any other breed. Of other breeds, the chief short-wools are the *black-faced Scots*, the *Cheviots* (now generally reared instead of the former in Scotland), the *Dorset*, the *Hereford*, the *Wiltshire*; and the chief long-wools, the *Teeswater*, the *Lincoln*, and the *Romney-Marsh*. But it would be difficult to select any district into which the South-Downs and Leicesters have not penetrated and materially improved the native breeds.

In many foreign countries the carcass of the sheep is disliked, or at least rarely eaten; and the animal is tended almost solely for its fleece. In Spain, except by the poorest, mutton is considered unfit for food; the wool, however, is of superior quality, particularly that of the *Merino* breed, which of late years has been successfully introduced into Germany, Australia, and elsewhere.

The commerce of sheep in Britain chiefly consists in fattening them up in the pastoral districts, and afterwards removing them to the towns for food. Immense quantities are carried from Ireland to Liverpool, and from the Midland Counties, Wales, Scotland, and other places to the metropolis. The number of sheep and lambs sold annually at Smithfield is about 1,400,000, which is exclusive of large quantities of carcasses brought to London by steamers, railways, and otherwise. The fleeces are mostly purchased from the farmers by staplers or dealers at annual wool fairs. The number of sheep in this country is variously reckoned. Mr Lucocck estimated the number in England and Wales in 1800 at 19,007,607, of which the greater part (14,854,299) were short-wooled; and, according to Mr Hubbard, the number of sheep had increased one-fifth between 1800 and 1828. The number at present, therefore, may be safely taken at 25,500,000, now chiefly long-wooled; to which adding one-third for Scotland and Ireland, makes the total of the United Kingdom, 34,000,000. Mr M'Queen, however, in his "Statistics of the British Empire" (p. 20), estimates the number of permanent stock at 48,000,000; their value at £60,000,000; and the quantity of wool annually produced at 246,700,000 lbs.!

SHEKEL, an ancient Jewish weight and coin, estimated, the former at ½ oz. avoirdupois, the latter at 2s. 7d. There were, however, several standards of the shekel, and various opinions are entertained respecting their values.

SHELLAC. [LAC.]

SHERBET, a favourite beverage in the East, made of water, lemon-juice, and sugar, with the addition of rose-water, or some other fragrant ingredient.

SHINGLES, a term applied in the lumber-trade of N. America and the W. Indies to thin boards, which are used in these countries for the same purpose as slates and tiles in Britain. They are from 18 to 30 inches long, 4 to 6 inches broad, and at one end ⅝ths of an inch thick, while at the other they are reduced to less than ⅛th of an inch. The roofs of buildings are shingled much in the same form as roofs are slated in Britain, and, when painted to correspond in colour, have very much the same appearance.

SHIP, a term applied generally to all decked vessels used in navigation; but by seamen only to those which have a fore, a main, and a mizzen-mast, with a top-mast and top-gallant mast to each, and in which the yards, in sailing before the wind, are braced square, the mizzen sail alone being usually in a fore and aft position. A barque has masts and sails like those of a ship, except that the mizzen-mast carries no top-sail or top-gallant sail. Each has a bowsprit, which carries a fore-stay-sail and a jib-sail. To other kinds different designations are given according to the number of their masts, the disposition of their sails, or their moving power,—as brig, snow, schooner, galliot, sloop, steamer, smack, and cutter, as explained under these heads. Ships are generally built of wood, but they are now sometimes made of iron. In the construction of a vessel the most essential conditions are—that it be capable of carrying its lading; that it be moved with great velocity, and readily obey the rudder; that it have the necessary stability, so as not to be overturned; and that its rolling or pitching be attended with as little strain as possible on the timbers. But the degree of attainment for each of these qualities—which in some respects are contrary to each other—will depend on the purpose, whether of war or commerce, for which the ship is built. In merchant-ships capacity is frequently of more importance than velocity; and in this case the relations between the length, breadth, and depth depend less upon hydrodynamical principles than in men-of-war. Upon these and other points relating to naval architecture, however, we must refer to the works cited below.

GLOSSARY OF NAUTICAL TERMS.

Aback, the position of the sails when blown flat against the mast.

Abaft or *Aft*, towards the hinder part.

A-beam, perpendicular to the ship's length.

Aboard, within the ship; also said of one when foul of another.

Adrift, not fastened.

Amain, to yield, or to let go.

Amidships, the middle of the ship.

Athwart or *Thwart*, across.

Back-Stays, ropes from the top-mast heads to the ship-sides in aid of the shrouds.

Beams, the timber supports stretching across the ship; whence *beam* expresses the width of a vessel; and a ship lying on her side is said to be on her *beam-ends*.

Bends or *Wales*, the ship's side planks, from the water upwards.

Bight, part of a rope between the ends; also a shallow hollow in a line of coast.

Bilge, the flat part of a ship's bottom.

Bilged, having the bottom stove in.

Bilge-water, that collected by leakage, &c.

Binnacle, the case of the steering compass.

Block, the case of the sheave of a pulley; two or more constitute a *tackle*.

Bobstays, strong ropes sustaining the bowsprit.

Boom, a pole stretching out the bottoms of particular sails.

Bower anchors, those at the bows.

Bows, the two fore extremities of a ship.

Bowsprit, a sloping mast at the bows.

Box hauling, bringing a ship when close-hauled round upon the other tack when she cannot tack or wear.

Boxing off, backing the head-sails to force the ship's head rapidly off the wind.

Boxing the compass, repeating the points in order.

Brace, a rope at the extremity of the yard to traverse the sails when necessary.

Breaming, cleaning the ship's bottom by fire.

Bulkhead, any partition in a ship.

Bumboat, the boat of a provision dealer, &c.

Burden, the tonnage of a ship.
Cable, the rope or chain holding the anchor.
Cant, to turn over; also the support of a bulkhead.
Capstan, a cylinder on which a rope is coiled by means of lever bars.
Careening, turning a ship to repair her bottom.
Cat-head, the bow timber to which the bower anchor is fastened.
Caulk, to stuff the ship's seams with oakum.
Channels, outside platforms extending the shrouds.
Close-hauled, tacks close down, sheets aft, yards braced sharp up, and bowlines hauled; the ship progressing as near the direction of the wind as possible.
Companion, the covering over a ship's staircase.
Courses, the lower square-sails.
Crank, when by ill construction, ballasting, or loading, a ship cannot carry sail without danger of oversetting.
Cringles, loops.
Davit, a spar used in managing the anchor.
Dead-eyes, a kind of blocks fastening the shrouds to the chains.
Dead-lights, the cabin window-shutters.
Dead-water, that which closes behind the stern.
Derrick, a tackle used at the outer quarters of a mizzen yard, &c.
Draught, the water depth of the ship.
Drift, the angle of a ship's motion with the meridian when driven by wind and waves, and not governed by the helm.
Dunnage, loose material used in stowage.
Easy, sailing without jerking or straining.
Fend off, pushing off to avoid contact.
Fluke, the part of the anchor which holds.
Fore and Aft, in the direction of the ship.
Forecastle, the upper deck near the head.
Forefoot, the fore extremity of the keel.
Forepeak, the place allotted to the crew in merchant ships.
Fother a sail, passing it under a leak.
Foul, a contrary wind; also uneven ground.
Furl, rolling up a sail to the yard.
Futtocks, the timbers between those of the floor and the top.
Gaff, the upper yard of fore and aft sails.
Galley, the kitchen of a ship.
Gangway a narrow passage.
Gasket, the cord by which furled sails are bound.
Grapnel, a small anchor for a boat.
Gripe, the fore part of a ship.
Gunwale, the upper part of the ship's side below the *bulwark*.
Halliards, ropes for hoisting yards, sails, &c.
Handspike, the lever of the capstan or windlass.
Hanks, rings upon which sails traverse, &c.
Hatch, the covering of a hatchway.
Hatchway, the opening of the ship's hold.
Haul, pulling upon a rope directly.
Haul the wind, bringing the ship to sail close by the wind.
Hawse, the part of the bows close to the cable.
Hawser, a large rope, or small cable.
Head, the fore extremity of a ship.
Heave, to employ force to move weights, &c.
Heel, the after extremity of the keel.
Helm, the mechanism of the steerage. Helm *a-starboard*, is to move the tiller to the right; *a-port*, to the left; *up*, to the weather side; *down*, to the lee side.
Hold, the inside of the ship's bottom.
Home, a thing when close in its place.
Horse, a foot-rope to support the seamen while leaning over a yard.
Hulk, an old ship unfit for service.
Hull, the main body of the ship.
Jack, a flag used in making signals.
Jamb, to squeeze tight; the opposite is *to render*.
Jeers, strong tackle for raising, or *swaying up*, the lower yards.
Jib, the sail between the fore-top-mast and bowsprit end.
Keel, the timber first laid in shipbuilding; the *false keel* is that added for defence, and making the ship hold better.
Kelson, a timber laid withinside across all the timbers over the keel, and forming its interior counterpart.
Knee, a bent timber for receiving another.
Land-locked, water apparently surrounded by land.
Lanyard, certain fixed or temporary lashings.
Larboard, the left side looking forward.
Lateen sail, a triangular sail, with a long inclined yard.
Launch, the largest boat of a man-of-war.
Lee, Leeward, the side not directly exposed to the wind.
Leeches, the sides of the sails; but the weather or side edge of any but a square sail is called the *luff*, and the other edge the *after leech*.
Lee-way, the deviation of the actual course from that steered.
Life line, a safety rope hung out.
Lifts, the ropes supporting yard-ends.
Lug-sail, a four-sided sail bent to a yard slung about one-fourth from the lower end.
Lying to, the state of a ship when the sails are so disposed as to counteract each other.
Marlinespike, a spike for opening strands of rope.
Martingale, the rope leading down from the jib-boom end.
Mast, the upright series of timbers supporting the sail-yards; of which in large ships there are three—the *main-mast*, *fore-mast*, and *mizzen-mast*, each consisting of *lower*, *top*, and *top-gallant* masts, and sometimes a *royal*.
Messenger, the hawser wound round the capstan.
Midships, the ship's middle as to length or breadth.
Nippers, ropes attaching the messenger to the cable.
Northing, the difference of latitude made in sailing northwards.
Offing, a deep part of the sea at a distance from the shore.
Orlop-deck, in a man of war, is the lowest, on which cables, &c., are stowed; the fore and after parts are called *cockpits*.
Painter, the rope fastening a boat, &c.
Poop, a high partial deck close aft.
Port, the opening for a gun.
Quarter, the after part of a ship's side.
Quarterdeck, the portion of the uppermost deck between the main and mizzen masts.
Rake to, is to incline. To *rake a ship*, is to fire into her in the direction of her length.
Reef, to lessen the sails; also a chain of rocks near the surface of the sea.
Reeve, putting a rope through a hole.
Rig, the peculiar manner of rigging.
Rolling, the lateral oscillation of a vessel.
Royal, the sail above the top-gallant-sail.
Rudder, the flat piece of wood hung on the stern-post for the purpose of steering.
Sagging to leeward, making considerable lee-way.
Sails, the sheets by the action of the wind on which the vessel is moved. They are variously designated, but generally from the mast, yard, or stay upon which they are stretched. The upper two corners are *earings*, the lower *clues*.
Scupper, a hole in the deck or side to carry off water.
Scuttle, an opening in the ship's side or deck.
Sea, a single wave; also general agitation.
Seams, the spaces between the edges of planks.

Sheer, the curve of the line of the deck.

Sheer hulk, a hulk fitted with sheers for masting ships, &c.

Sheers, two spars raised vertically for masting.

Sheets, ropes for extending sails to the wind.

Sheet anchor, the third of the four ship's anchors.

Shrouds, the ropes supporting a mast laterally.

Sky-sail, a small sail set above the royal.

Slops, clothes and bedding supplied to the seamen at their expense.

Spanker, the gaff sail on the mizzen-mast.

Sprit-sail, a four-cornered fore-and-aft sail.

Starboard, the right side looking forward.

Stay, a rope leading forward in support of the mast. *In stays*, the act of tacking. To *miss stays*, to fail in attempting to tack.

Studding-sails, narrow sails set at the outer edge of the square sails.

Swab, a bundle of old yarns swung to dry the decks.

Tack, the weather clue of a course, &c. The *starboard tack* is when a ship, close hauled, has the wind on the starboard side; the *larboard tack* is when the wind is on the larboard side. *To tack* is to change from one to the other by turning the ship with her head to the wind.

Tackle, a pulley composed of several blocks.

Taffrail, the uppermost rail of the stern.

Tank, a square water-cistern of sheet iron.

Tarpauling, a tarred or painted canvass cover.

Tiller, the turning bar of the rudder.

Timbers, the upright pieces of a ship's frame.

Top, a platform near the lower mast head.

Topping lift, a rope for raising a yard end.

Traveller, a ring which slides along a rope.

Treenails, wooden bolts securing the ship's planks.

Truss, a rope confining a lower yard.

Trysail, a small gaff sail of storm canvass.

Veer, to give the ship more scope of cable.

Waist, in a man of war, the part of the gun-deck between the fore and main masts.

Wake, the track which a ship leaves in the water.

Warp, a rope laid out for the purpose of moving a ship.

Watch, the portion of the crew on duty.

Water-logged, loss of buoyancy by leakage, &c.

Way, progress.

Wear, placing a vessel on the other tack by turning her round, with her stern to the wind.

Weather, the side on which the wind blows. *To weather*, to pass to windward.

Weather gage, is said of a ship to windward of another.

Wheel, that by which the tiller is moved.

Whip, a rope passed through a single block.

Windward, the side directly exposed to the wind.

Wings, passages between the fore and after cockpit.

Yard, the beam on which a sail is extended.

Yard-arm, the extremity of the yard.

Yaw, temporary deviation from a direct course.

Windlass, a horizontal modification of the wheel and axle, used in small ships instead of a capstan.

[Further information will be found in *Charnock's Marine Architecture*, *Darcy Lever's Seamanship*, *Falconer's Nautical Dictionary*, *Encyclopædia Britannica*, and the *Penny Cyclopædia*; also *Brande's Dictionary of Science*.]

SHIPPING. The most important branches of the Law of Shipping will be found discussed under various sub-heads as follows:—

The arrangements it is necessary to adopt and adhere to, in terms of the Navigation Laws, for securing the privileges of a British vessel—under the head NAVIGATION.

The registering of vessels, and the collateral operations in regard to the property and transfer of shares, dictated by the Registry Act—under the head REGISTRY.

The regulations for the enforcement of the Revenue Laws—under the heads CUSTOMS and SMUGGLING.

The arrangements appointed by statute for adjusting the mutual rights of the mariners and their employers—under the head SEAMEN.

The rights and obligations of the shipmaster—under the heads MASTER and BARRATRY.

The Law of Insurance—under the head INSURANCE, MARINE.

The law regarding contracts connected with the employment of vessels—under the heads BILL OF LADING, CHARTER-PARTY, DEMURRAGE, and FREIGHT.

The law regarding securities over the ship or cargo—under the heads BOTTOMRY and RESPONDENTIA.

Almost the only subject that remains for special consideration is the responsibility of shipowners for goods committed to their charge, independently of special contract. It is the duty of the owners to have their vessel, both in hull and rigging, suited for the voyage, and for the safe keeping of the species of cargo contracted for or received on board. There must be a competent master and a sufficient crew of able seamen. The ship must have on board whatever papers are necessary for her protection and that of her cargo, whether required by the laws of the country she belongs to, or by those of the port of destination, or dictated by international law. There must be no false or fraudulent papers, which may subject the ship to capture or detention. The mercantile customs of the port must be adhered to in regard to the employment of wharfingers, lightermen, &c. in lading. The owners are responsible for theft or robbery committed before breaking ground. The master previous to sailing must make the necessary clearances at the Customhouse, and pay all the usual charges. When the preliminaries are completed, the master must sail without delay when the weather is favourable, but not till then. Where sailing with convoy is stipulated for or required by law, the sanction must be obeyed in terms of the law on that subject. [CONVOY.] A pilot must be employed in those roads, rivers, and narrow seas where such a precaution is enjoined, either by special law or usage. But there is by statute no responsibility for the absence of a pilot, unless it be proved that it arose "from any refusal to take such pilot on board, or from the wilful neglect of the master in not heaving to and using all practicable means consistent with her safety, for the purpose of taking on board any pilot, who shall be ready and offer to take charge of the ship" (6 Geo. IV. c. 125, § 53). "The master must proceed to the place of destination without delay, and without stopping at any intermediate port, or deviating from the straight and shortest course, unless such stopping or deviation be necessary to repair the ship from the effects of accident or tempest, or to avoid enemies or pirates, by whom he has good reason to suspect that he shall be attacked, if he proceeds in the ordinary track, and whom he has good reason to hope that he may escape by delay or deviation, or unless the ship sail to the places resorted to in long voyages for a supply of water and provisions, by common and established usage" (*Abbott*, 317). If the ship be captured or lost in consequence of deviation, the freighter may recover the prime cost of his goods and the shipping-charges. In cases of difficulty and of danger, the master has to keep in view that it is his primary duty to convey the cargo to its place of destination, and that it is only in an extreme case, and when there is scarcely a possibility of accomplishing this object, that he is entitled to act as agent for the freighter, and adopt the course that seems to involve the least sacrifice to his property. On arrival at the port of destination, the ship must be securely moored or anchored, and all papers delivered, and other requisites performed, in terms of the customs regulations and the laws of the place.

The pleas which, in the absence of special stipulation, will excuse the master and owners in the case of injury or loss, are in general briefly described as, "The acts of God," or, "of the queen's enemies," and "perils of the sea." The first expression applies to all sudden calamities—as lightning or a hurricane. The damage must be from the direct agency of the calamity: thus, where part of a bank had been swept away by a flood, and a vessel, striking against it, would have remained safe had the bank been in its old condition, but sunk stern forwards, and damaged the goods by reason of the change, there was no exemption from liability (Smith *v.* Shepherd, *Abbott*, 338, 339). Fire produced internally does not come within the exemptions by common law; but by statute (26 Geo. III. c. 86), the owners are exempted from responsibility for such loss. The "acts of the queen's enemies" apply to capture or injury by hostile powers. The perils of the sea embrace all those usual calamities incident to navigation, which cannot be obviated by the usual care and foresight. It will very often be a nice question whether a calamity is or is not such as could have been so obviated; and this is particularly the case in damage by Collision (which see). There are statutory limitations on the responsibility of owners. By 26 Geo. III. c. 86, § 3, they are not liable for loss or damage to "any gold, silver, diamonds, watches, jewels, or precious stones, . . . by reason or means of any robbery, embezzlement, making away with, or secreting thereof," unless their nature, quality, and value have been inserted in the bill of lading, or otherwise declared in writing to the master or owners. By 55 Geo. III. c. 159, the responsibility of owners for damage arising from any act or neglect not occasioned by the fault or privity of the owners, is limited to the value of the ship, and the freight on the voyage. (*Abbott on Shipping, by Shee*, 295-358.)

There are certain statutes, independently of those already mentioned, containing regulations with which it will be generally necessary for those in charge of vessels to be acquainted.

Pilotage is regulated by 6 Geo. IV. c. 125, "For the amendment of the law respecting pilots and pilotage; and also for the better preservation of floating lights, buoys, and beacons."

Ships conveying Passengers to ports out of Europe and not in the Mediterranean Sea, are under the regulations of 5 & 6 Vict. c. 107, which repeals the previous act of 5 & 6 Wm. IV. c. 53. It makes special regulations for the provisioning of emigrant ships, for their tonnage according to the distance of their destination and the number of passengers, and similar matters.

The conveyance of passengers between Great Britain and Ireland is regulated by 4 Geo. IV. c. 88.

The Quarantine Regulations are embodied in 6 Geo. IV. c. 78.

SHIPPING. Under COMMERCE, COLONY, and EAST INDIA COMPANY, we have given a summary of the early progress of maritime enterprise among the states of Europe. Of the British commercial navy there is no authentic account prior to last century. It is known, however, to have become considerable, compared with the shipping of other countries, during the reign of Elizabeth, and to have gradually increased under her successors, particularly Charles II. and James II.,—the shipping cleared outwards under the national flag having, it is supposed, doubled in amount between the Restoration, 1660, and the Revolution, 1688.

In 1701, according to Customs Returns (*Macpherson's Annals of Commerce*, vol. ii. p. 719), there belonged to English ports (chiefly London, Bristol, and Yarmouth) 3281 vessels, estimated to measure 261,222 tons, and carrying 27,196 men. The shipping is supposed to have been doubled between 1701 and 1760; after which its increase became quite extraordinary. In 1800 (*Ib.* vol. iv. p. 535), it amounted in England to 1,466,632 tons; Scotland, 161,511; Ireland, 54,262; Channel Isles, 16,110; and Colonies, 157,364 tons: total, 1,855,879 tons, employing 138,721 men.

The importance of the commercial marine as a nursery for seamen to man the national fleet was early seen and acknowledged. And by the famous Navigation Act, 1651, a complete monopoly of the carrying trade of Britain was secured to her merchantmen. Under NAVIGATION LAWS, an account is given of the history and present state of that monopoly, which was rigorously maintained upwards of 150 years —down indeed to our own time—when the retaliatory policy of the United States and Prussia led to several important relaxations; the principal being the *Reciprocity System* of Mr Huskisson, which was introduced in the year 1823.

The introduction of the reciprocity system having been followed by a depreciation in the value of shipping property, violent attacks were made upon Mr Huskisson's policy by the shipowners,—a numerous, wealthy, and influential body,—who, acting in concert, have always been able to command a speedy attention to their representations. It is now, however, very generally admitted that the depression which then took place is fairly attributable to other causes. Ships became cheaper because they could be built cheaper, arising from a great fall in the price of their materials,—wood, iron, copper, and hemp,—while improvements took place, which enabled the old work to be done with fewer hands than before. These circumstances, with perhaps some overtrading in 1824 and 1825, are now held sufficiently to account for all the real depression of the shipping interest which occurred. But the most triumphant vindication of Mr Huskisson's policy is to be found in the facts, that the number and tonnage of vessels built since the change have been greater than at any preceding period; the registered shipping having increased from 2,519,044 tons in 1822 to 3,512,480 tons in 1842, or about 40 per cent.; and the amount of British shipping cleared outwards for foreign countries and colonies, from 1,539,260 tons in 1822, to 3,429,279 tons in 1841—an augmentation of 122 per cent. The increase of foreign shipping cleared outwards in the same 20 years was from 457,542 to 1,336,892 tons.

Nor is the constant progress of British shipping less conspicuous when viewed in comparison with that of other countries. For example, in the trade with the United States—our chief maritime rival—a continually increasing proportion of our tonnage has of late years been employed. Between 1821 and 1836, the British shipping which entered the ports of the republic increased from 55,188 tons to 529,922 tons, or 860 per cent.; while the increase in the American shipping, employed in the foreign trade of the States, was, in the same period, not more than from 765,098 tons to 1,352,653 tons, or 77 per cent. And as regards Prussia, to which our shipowners looked with the greatest apprehension, her mercantile navy has been most strikingly diminished in amount since the commencement of our reciprocity agreement with her. It likewise appears (*Porter's Progress of the Nation*, § 3, ch. 10), that the proportion of foreign to national shipping, employed in the import and export trade of the United Kingdom, is smaller than in any other state of the least importance,—the proportion in 1835, 10 years after the reciprocity system came into operation, being only 28 per cent.; while in the United States it was 32 per cent.; in France, 60 per cent.; in Russia, 78 per cent.; at Dantzic, 35 per cent.; and in Sweden (in 1834), 53 per cent.

Shipbuilding in the United Kingdom is prosecuted chiefly in London, Newcastle, Sunderland, Hull, Liverpool, and the ports on the Clyde; which last are especially celebrated for their steam-vessels. It is also carried on extensively in New Brunswick and other parts of British America. The cost of new ships, including outfit, averages from about £10 to £12 per ton; though the slop-built ships of New Brunswick cost little more than £6 per ton. And it appears from a table compiled by Captain Parry, from the estimates of 30 different authorities, and introduced by him in his Report on the Caledonian Canal (*Par. Paper*, 1842, No. 74, p. 81), that the average cost of one day's wages, victuals, and wear and tear for vessels of various sizes, from 60 to 400 tons, is nearly as follows:—

60 tons.	100 tons.	150 tons.	200 tons.	250 tons.	300 tons.	350 tons.	400 tons.
£1:1:8	£1:11:4¼	£2:2:5	£2:14:3¾	£3:5:2	£3:18:11½	£4:10:5¾	£5:4:4¼

Registered Shipping of the British Empire, as on 31st December 1840 and 1841; and Ships Built in the Years ended 5th January 1841 and 1842, respectively.

	Ships Registered.						Ships Built.			
	1840.			1841.			1840.		1841.	
	Vessels.	Tons.	Men.	Vessels.	Tons.	Men.	Ships.	Tons.	Ships.	Tons.
England	16,535	2,111,049	120,154	17,089	2,223,940	124,485	1065	165,852	815	111,830
Scotland	3,479	429,204	28,428	3,642	468,879	30,287	263	42,322	245	43,318
Ireland	1,969	183,854	11,927	2,016	193,807	12,345	42	3,115	51	4,430
Jersey, Man, &c.	671	44,155	5,018	714	48,773	5,224	78	8,775	81	8,731
Colonies	6,308	543,276	35,813	6,591	577,081	37,857	771	143,288	*549	114,505
Totals	28,962	3,311,538	201,340	30,052	3,512,480	210,196	2219	363,352	1741	282,814

Account of the Tonnage of Shipping Registered at each of the principal Ports of the United Kingdom, including the Channel Islands, on December 31, 1841.

	Sailing Vessels.		Steam Vessels.		Sailing Vessels.		Steam Vessels.
	Under 50 Tons.	Above 50 Tons.			Under 50 Tons.	Above 50 Tons.	
England.				*Scotland.*			
London	19,165	563,295	37,257	Aberdeen	1,963	49,332	3,162
Beaumaris	9,540	17,306	44	Alloa	965	17,382	450
Bristol	2,940	37,557	2,788	Dumfries	4,642	6,502	306
Dartmouth	4,574	24,171	17	Dundee	2,399	48,267	1,816
Exeter	1,637	15,637	17	Glasgow	1,994	81,999	10,298
Gloucester	6,244	5,732	....	Greenock	5,007	83,138	186
Goole	7,855	14,521	135	Inverness	3,125	5,285	18
Hull	5,261	65,172	2,758	Irvine	811	14,053	56
Ipswich	1,622	12,116	266	Kirkaldy	3,019	8,727	207
Liverpool	4,154	302,730	5,563	Leith	3,113	21,468	1,568
Lynn	358	17,156	....	Montrose	1,362	22,854	101
Newcastle	3,235	259,184	2,560	Perth	526	9,507	19
Plymouth	7,859	21,009	288	Port-Glasgow	910	12,095	347
Poole	1,188	12,155	....	*Ireland.*			
Portsmouth	3,512	9,425	167	Belfast	4,120	44,236	1,222
Rochester	7,504	6,919	99	Cork	3,631	29,595	217
Scarborough	1,289	31,010	....	Dublin	7,153	12,337	10,815
Stockton	736	53,353	427	Limerick	1,285	12,515	....
Sunderland	1,527	176,252	433	Newry	4,715	5,837	203
Whitby	1,207	47,837	67	Waterford	1,250	18,310	999
Whitehaven	1,576	68,990	337	*Jersey*	2,596	23,155	117
Yarmouth	10,042	34,320	451	*Guernsey*	641	14,755	....

Account of the Tonnage of Shipping entering Inwards and Outwards at the principal Ports of the United Kingdom in the Year 1841.

	Coastwise.				Colonial.		Foreign Trade.			
	Sailing Vessels.		Steam Vessels.		Inwards.	Outwards.	Inwards.		Outwards.	
	Inwards.	Outwards.	Inwards.	Outwards.			British.	Foreign.	British.	Foreign.
London	2,726,030	777,930	304,683	303,600	474,631	422,809	524,628	317,608	349,577	291,892
Liverpool	456,544	385,709	565,289	524,317	370,850	382,104	285,779	337,888	296,026	350,764
Bristol	169,813	117,711	141,063	139,812	45,615	45,047	20,800	8,564	16,544	8,619
Newcastle	239,435	1,950,614	38,981	39,530	25,318	72,942	160,295	113,366	346,212	175,043
Hull	72,101	70,074	112,842	114,309	45,529	35,134	177,765	119,099	125,847	95,040
Goole	171,066	176,285	9,935	10,612	....	....	2,344	3,843	5,180	3,452
Stockton	61,545	1,014,918	5,982	5,673	8,855	4,684	35,271	17,554	75,900	44,814
Sunderland	67,685	659,820	4,837	5,111	11,756	22,910	137,123	39,440	216,771	63,003
Whitehaven	39,844	348,520	28,189	28,986	22,021	24,799	724	268	3,172	67
Newport	76,952	471,313	79	....	5,516	5,404	6,554	4,430	22,544	20,507
Plymouth	131,217	67,774	115,085	26,592	20,760	27,250	14,660	11,155	6,935	11,820
Swansea	213,243	370,437	26,288	26,288	8,480	6,494	32,344	7,914	33,173	8,217
Glasgow	172,760	195,343	223,820	231,204	15,779	47,066	24,575	7,974	33,530	9,432
Greenock	78,254	25,360	62,348	.....	77,765	70,440	10,803	2,035	16,556	2,169
Port-Glasgow	8,146	4,392	1,927	4,022	29,264	24,373	1,256	441	1,612	441
Leith	149,799	112,992	131,045	139,162	15,794	14,833	35,754	49,822	15,419	17,955
Dundee	133,541	59,769	33,246	31,309	6,926	6,153	34,809	15,516	35,147	8,231
Aberdeen	136,874	65,296	49,112	51,392	9,832	15,690	9,147	6,270	12,784	4,623
Dublin	355,343	126,209	184,233	223,607	30,078	18,626	10,971	8,839	3,968	8,291
Cork	183,816	108,849	65,420	65,521	22,304	21,484	8,102	2,338	3,994	1,948
Belfast	196,871	59,682	140,719	144,866	21,751	18,302	10,385	4,856	19,370	4,941

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* This return was incomplete at the date when the account was closed.

TOTALS in 1841.			England.	Scotland.	Ireland.	Total.
Coastwise	Sailing vessels	Inwards	7,305,874	1,119,564	1,911,942	9,637,380
		Outwards	8,265,941	1,157,610	637,801	10,061,352
	Steam vessels	Inwards	1,687,013	645,707	571,064	2,903,784
		Outwards	1,539,311	552,907	655,928	2,748,146
Colonial	Inwards		1,202,004	181,011	138,471	1,521,486
	Outwards		1,180,434	214,673	114,582	1,509,689
Foreign	Inwards	British	1,654,810	146,409	38,516	1,839,735
		Foreign	1,150,655	110,732	96,441	1,357,828
	Outwards	British	1,703,071	182,354	34,165	1,919,590
		Foreign	1,215,870	93,484	20,953	1,330,307

Tonnage of Vessels employed in the Foreign and Colonial Trade of the United Kingdom (including their repeated Voyages), separating British from Foreign Vessels, and distinguishing the Trade with each Country, in 1840 and 1841.

	1840.				1841.			
	Inwards.		Outwards.		Inwards.		Outwards.	
	British.	Foreign.	British.	Foreign.	British.	Foreign.	British.	Foreign.
Russia	340,567	79,152	225,581	58,861	294,227	75,616	195,604	59,145
Sweden	11,933	53,337	11,760	39,999	13,170	46,796	17,643	35,674
Norway	3,166	114,241	1,732	114,662	977	113,025	2,642	101,321
Denmark	6,327	103,067	92,631	207,113	3,368	83,009	82,090	193,833
Prussia	112,709	237,984	73,943	177,449	88,198	210,254	72,497	165,783
Germany	165,839	88,556	173,110	82,271	188,272	110,348	191,704	91,745
Holland	212,503	69,770	217,665	65,542	212,782	67,946	217,667	61,758
Belgium	57,274	48,996	49,457	46,541	69,835	54,241	63,935	40,616
France	323,393	181,497	365,842	179,882	387,934	194,236	434,936	184,069
Portugal, Azores, &c.	61,195	9,767	68,238	30,969	61,161	9,565	61,182	23,501
Spain, Canaries, &c.	50,649	5,892	48,321	14,270	45,508	5,560	58,457	10,339
Gibraltar	23,099	....	44,395	1,055	23,314	....	46,663	344
Italy & Ital. Islands	85,576	21,095	63,821	14,043	68,342	12,335	77,595	10,789
Malta & Ionian Isles	10,962	....	42,288	1,035	16,315	....	54,886	5,431
Turkey & Greece	28,005	1,005	39,530	2,623	27,483	187	55,535	5,015
Africa and African Islands	82,528	691	102,306	4,172	111,143	912	129,816	6,330
India, Ceylon, Singapore	137,883	....	178,834	370	207,075	....	215,421	....
China	20,056	....	2,942	1,082	23,344	....	13,738	1,381
Other parts of Asia	12,316	1,304	11,716	1,762	14,910	855	13,227	2,886
Australasia	25,905	....	115,119	218	29,868	....	125,009	....
British America	808,222	....	694,094	2,213	841,348	....	652,725	384
——— W. Indies	181,731	....	222,620	197	174,975	....	211,536	....
Foreign W. Indies	41,174	6,881	36,460	19,646	42,059	2,889	52,463	13,393
United States	138,201	426,867	180,041	409,900	121,777	294,170	159,597	313,390
Mexico and South America	78,533	8,010	90,984	12,989	119,827	5,885	88,714	9,785
Whale Fisheries	14,296	....	15,276	....	13,098	....	10,578	....
Jersey, Man, &c.	163,459	2,182	124,278	24	160,901	3,337	132,820	....
Total	3,197,501	1,460,294	3,292,984	1,488,888	3,361,211	1,291,165	3,429.279	1,336,892

Further information respecting British shipping will be found under LLOYD'S, STEAM NAVIGATION, TONNAGE, and in the articles referred to on page 610; and respecting the shipping of foreign countries under their respective heads.

SHIPSHUSBAND, the agent or commissioner for the owners. He may be a part-owner or a stranger. His powers are by mandate, commission, or verbal appointment; the latter chiefly where he is also part-owner. His duties are to arrange every thing for the outfit and good order of the ship—stores, repairs, furnishings; to enter into contracts of affreightment; and to superintend her papers. His powers do not extend to the borrowing of money; but he may grant bills for furnishings, stores, repairs, and the necessary engagements binding on owners, although he may have received money wherewith to pay them. He may draw the freight; but is not entitled to take bills instead of it, giving up the lien by which it is secured. He cannot delegate his authority.

SHOE-TRADE. This trade, in which we include the manufacture of boots, is generally followed in all parts of the kingdom; but, though employing a greater number of persons than any of the other common handicrafts, it scarcely rises any where into importance except in London, Northampton, and Stafford, where the public contracts are chiefly executed, and supplies furnished for exportation. In these places a considerable division of labour has been introduced into the trade, no fewer than twenty distinct branches being distinguished. This is particularly the case in what is called the *men's line*.

Shoes and boots, as articles of export, occur principally in the colonial trade; but being included in the customs accounts under the general head of "leather wrought and unwrought," the amount shipped cannot be stated. They also occur as imports in our trade with France, especially light shoes for females, and men's boots; the latter are of neat workmanship, and are said to be in other respects of good quality. This trade will probably increase; as, in the new tariff (1842), the import duties on boots and shoes, formerly about 30 per cent., have been reduced fully one-half. Before this reduction, the imports from France amounted to about 50,000 pairs per annum.

We possess few data for determining the value of the boot and shoe trade in the United Kingdom; but the annual consumption, estimating the average expenditure of each individual of our population of 27,000,000, at the moderate rate of 10s., will amount to £13,500,000.

SHOP (Fr. *Boutique*. It. *Loja*), a place for the sale of commodities by retail. Shops are now, generally speaking, arranged indiscriminately; but the old custom, and one probably coeval with the existence of cities, was to appropriate particular streets to particular trades; and some relics of this usage still remain in London. Paternoster Row continues to be much occupied by booksellers; Lombard Street, by bankers; Long Acre, by coachmakers; and Cranbourne Alley, by straw-hat-makers; while Holywell and Monmouth Streets still uphold their ancient reputation for old clothes, and Broker's Alley is crowded by dealers in second-hand furniture. In London, the number of shops is estimated at about 40,000. Many of these, as well as in the provincial cities, attract attention by a gorgeous display of wares in plate-glass windows, comprising almost their entire front, while their interior is frequently lined with mirrors. Every sort of device, in short, is used to attract notice and custom. In 1785, a tax was imposed on shops in Britain, but it was abolished in 1789.

In America, instead of shops, unostentatious warehouses, called stores, are commonly used by retailers; and in the East, this class, as well as the common handicrafts, are generally arranged, in each city, in a place exclusively appropriated to them, called a BAZAAR.

SHRIMP (*Crangon vulgaris*), a crustaceous fish, common on the shores of England, and brought in large quantities to Billingsgate, chiefly from Gravesend, Lynn, Boston, Leigh, and Isle of Wight. Shrimps are boiled before being carried to market; they are in season during the whole year, though the chief demand is in spring. Those of Pegwell Bay are preferred; and the preparers of potted shrimps profess to make use of them only.

SHROFF, SHROFFAGE. *Shroff*, in Indian commerce, means a banker or money-changer. *Shroffage* is the examination of coins, and separation of the good from the debased. [INDIA.]

SHRUB, a compound liquor, made of spirit, acid fruit, and sugar.

SIAM, a state in the peninsula of India, bounded N. by China; E. by Annam; S. by Gulf of Siam; and W. by Birmah. Area, 190,000 sq. miles. Population, 3,000,000. It comprises Siam Proper, part of Laos and Cambodia, and certain tributary Malay states. Capital, Bankok, a flourishing port on the Menam, in lat. 13° 58′ N., and long. 100° 34′ E., about 20 miles from the sea; pop. 90,000; about 4-5ths are Chinese. Government, a despotic monarchy: the king is nominally a vassal of China.

The kingdom is generally mountainous. The fertile part is composed chiefly of the valley of the Menam, a large river which descends from the heart of Thibet, and at certain seasons overflows and inundates a considerable portion of the country. Of the climate little is known beyond Bankok, which is represented by Mr Crawfurd as being far from unhealthy. Mines exist in different places, but they are yet almost unexplored. Tin, copper, lead, zinc, antimony, with small quantities of gold, are found; but the metal which occurs in greatest relative abundance is iron, particularly on the Menam. The vegetable productions differ in no essential respect from those of other Indian countries. The district within the tract of inundation is admirably suited for rice; and, excepting Bengal, the quantity exported is greater than from any country in Asia.

The inland and coasting trades are considerable. The former is principally conducted on the Menam and its branches in flat boats and bamboo rafts; but a large portion is likewise carried on by means of elephants, which are generally used for land carriage. The latter embraces a considerable traffic with the countries on the shores of the Straits of Malacca and Bay of Bengal, by which channels are imported opium, cotton goods, and other commodities. The maritime commerce with foreign countries is almost wholly concentrated at Bankok, which, after Canton, is the greatest shipping port in Asia not settled by Europeans. The most important branch is that with China; the staple exports consisting of black pepper, sugar, stick lac, sapan wood, cardamoms, cotton-wool, eagle-wood, rice, hides, gamboge, and wood for furniture; and the imports, of coarse china-ware, teas, and raw and wrought silks, with a quantity of Chinese silver in ingots: in this trade are employed about 35,000 tons of junks, which arrive in January and February, and leave in June and July. Considerable intercourse exists also with the ports of Cambodia and Cochin China; but the most extensive branch, after that with China, is conducted with Singapore, Malacca, Penang, Batavia, and other places in the Malayan Archipelago. In this trade the staple exports of Siam are sugar, salt, oil, and rice; to which may be added the minor articles of stick lac, iron pans, coarse earthenware, and lard. The returns are British and Indian piece-goods, opium, with a little glass-ware, and some British woollens from the European settlements, with commodities suited for the Chinese markets, such as pepper, tin, dragon's blood, rattans, bêches-de-mer, swallows' nests, and Malayan camphor from the native ports. This trade is carried on almost entirely by means of junks, and has greatly increased of late years.

Almost every kind of merchandise, except sugar and pepper, is the subject of royal monopoly; and the Chinese are the only foreigners whose trade is upon a liberal footing. In 1822, Mr Crawfurd, as representing our Indian government, effected a commercial treaty with the King of Siam; after which, several British merchants attempted to settle in Bankok, but without success. The Americans also obtained a treaty in 1836.

Measures and Weights.—The fathom of 4 cubits, or 8 spans, = 6½ feet; 20 fathoms = 1 sen; and 100 sen = 1 yuta. The sen is also a square measure of 20 fathoms to the side. The ordinary measure is the catty = 2⅔ lbs. avoirdupois, being double the Chinese catty. The pecul contains 50 catties, and is thus equal to the Chinese. In weighing rice and salt a large measure is used, consisting of 22 peculs to the former and 25 to the latter: rice is also measured by the basket, 100 of which are equivalent to the large measure above mentioned.

Money.—The circulating medium is stated by Mr Crawfurd (*Embassy to Siam, &c.*), to consist only of silver and cowrie shells. The general coin is the bat or tical of 4 salungs, 8 fuangs, 16 song-p'hais, 32 p'hai-nungs, or 6400 cowries. The tical weighs 236 troy grains, and is commonly valued at 2s. 6d. sterling; but its standard is uncertain. The catty of 80 ticals, and the pecul of 100 catties, are used only to denote large sums.

SICCA, a weight for gold and silver in India = 179⅔ troy grains.

This was the weight of the ancient standard rupee of Hindostan, while the Mogul emperor was the sole sovereign, and which was thence denominated the *sicca rupee*. In course of time this standard, though professed to be followed, was gradually altered by the powers established in different parts of India; some being lighter, and others, as the Calcutta sicca rupee (weighing 191·916 grains, of which 175·921 pure), heavier than the Mogul money. To remedy the confusion thence arising, an ideal standard, called the *current rupee*, was introduced, to which all others were to be compared before they were entered into accounts. 116 current rupees = 100 Calcutta sicca rupees. The East India Company's rupee, now the general standard, weighs 180 troy grains, or 1 *tola*, which is also the basis of the new system of weights. [INDIA.]

SICILY, the largest and most fertile island of the Mediterranean, forms, with the Neapolitan territory, from the south extremity of which it is separated by the Strait of Messina, the United Kingdom of the Two Sicilies. Area, 10,508 sq. miles. Population in 1842, about 2,100,000. The head of the political administration is a lieutenant-general, representing the king; but all important matters are referred to the Sicilian section of the council of state at Naples.

The island, triangular in form, is traversed along its N. side by a chain of mountains, which gives off several branches to the S.; besides which, there are several detached groups, including the celebrated Etna, in height 10,872 feet, near the E. coast. There are some extensive plains; but, generally speaking, the island consists of hill and valley,—the whole watered by numerous small rivers. The climate is salubrious and delightful, except during the sirocco, and in some low and marshy tracts.

The difference of elevation in Sicily, and its fertility and climate, naturally give great variety and excellence to its productions. Anciently it was styled the granary of Rome; but in modern times, sloth, ignorance, political dependence, and misgovernment, have brought its prosperity to a comparatively low ebb. Of late, however, some beneficial changes have taken place; in 1812 and 1838 laws were passed for the abolition of the feudal system, and the emancipation of the peasantry; restrictions which existed to the exportation of corn have been removed; and, more recently, funds have been raised for the formation of good roads.

The arable lands comprise 3,700,000 acres; vineyards, chiefly around Marsala, 115,000 do.; gardens, 260,000 do.; woods and olive groves, the latter principally on the N. coast, 1,125,000 acres; the remainder of the island is mostly waste. Agriculture is in an exceedingly rude state; but the crops raised, principally wheat, barley, and potatoes, with hemp, flax, and cotton, are notwithstanding abundant, though affording at present little surplus for export. The rearing of live-stock occupies even less attention than tillage. The vintage, except in some English establishments at Marsala is an object of little care; and the olive-oil is also of low quality from the same cause. The culture of sumach, however, is more attended to; and the fruits, especially oranges and lemons, grow luxuriantly. The chief other vegetable products are detailed in the list of exports. The only mineral product of importance is sulphur, which is abundant in the central and south districts. Manufactures are confined to a few establishments in the principal cities.

The exports mainly consist of raw produce. In 1839, the quantities and values of the principal articles were as follow:—Sumach, 238,082 cwts., £263,567; fruits, dry and preserved, 102,108 cwt., £163,175; oranges and lemons, 589,036 boxes, £119,737; wines and spirits, 4,421,537 gallons, £156,315; sulphur (greatly below the average, which is 700,000 cantars, owing to the existence of the French monopoly, since abolished), 542,384 cwts., £116,142; olive-oil, 692,579 gallons, £96,569; with considerable quantities of manna, linseed, silk, liquorice paste, rags, salt, barilla, argol, and other articles; the whole amounting to £1,350,493; of which Britain took £379,879 (below the usual amount, owing to the sulphur monopoly); United States, £393,723; and France, £198,168. The imports consist chiefly of sugar, coffee, and other colonials; cottons, yarn, and wool; woollens, silks, and linens; hides, hardware, earthenware, codfish, &c., which are mostly brought from America, England, France, and Genoa. In 1839, the imports were valued officially at £568,998, but they may be more correctly estimated at £1,000,000; many commodities, especially sugar and other tropical products, being smuggled in consequence of the high customs and tonnage duties. The shipping amounted in 1838 to 2250 vessels, 43,000 tons; employing nearly 25,000 men. [SULPHUR.]

PORTS.—*Palermo*, the capital, is situated in a bay on the N. coast, in lat. 38° 8′ N., long. 13° 22′ E., in a fertile plain between two mountain ridges and the sea. Pop. 140,000. The harbour, which is at some distance, is formed by an artificial mole, which, however, does not protect it effectually. In 1838, according to Mr Macgregor's Report on Sicily, the imports amounted to £284,009; and the exports to £346,310.

Messina, the chief trading port, lies on the N. E. coast, opposite Calabria, in lat. 38° 11′ N., long. 15° 34′ E. Pop. 85,000. The town rises in the form of a crescent on the W. side of the harbour, which is one of the best in the Mediterranean. In 1838, the imports amounted to £294,811; and the exports to £368,492.

Alicata, Catania, Cefalu, Girgenti, Marsala, Mazara, Sciacca, Syracuse, Trapani, Terra Nova, and Termini, are the chief other ports.

MEASURES, MONEY, REVENUE, &c.

Measures and Weights.—The canna of 8 palmi or 96 inches = 81·35 Imp. inches; and 3 palmi = 1 braccio.

The salm of land = 5¼ Imp. acres.

The tonna, wine measure, of 4 barili, 8 quartare, or 160 quartucci, = 31·24 Imp. gallons: the pipe is 12 barrels, = 93·72 Imp. gallons.

The salma generale, corn measure, of 4 bisaccie, 16 tomoli, or 64 mondelli, = 11¼ staja Leghorn measure, = 7·61 Imp. bushels; the salma grossa, similarly divided, = 14 staja, Leghorn measure, = 9·47 Imp. bushels.

The cantaro grosso of 100 rottoli grossi, each of 33 ounces, = 192·53 lbs. avoirdupois: the common cantar, or cantaro sottile, of 100 rottoli sottili, each of 30 ounces, = 175·03 lbs. avoirdupois; the pound of 12 ounces = 4901 troy grains; and 100 Sicilian lbs. of 12 ounces = 70·01 lbs. avoirdupois. The weight and fineness of the precious metals are expressed as in NAPLES.

The Sicilian ship ton = 5 Sicilian salmes = 94 cubic French feet (*pieds de Roi*).

N. B.—In Messina, oil is sold by the caffiso, = 2·58 Imp. gallons, and reckoned by weight at 12½ rottoli grossi, or about 24 lbs. avoirdupois; in Palermo it is sold by the cantaro grosso.

Money.—Accounts are stated in oncie of 30 tari or 600 grani; also in ducats of 100 grani, each of 10 piccioli or cavalli, as in Naples. The oncia = 3 Neapolitan ducats (valued in gold), = 10s. 3½d. sterling; and 58 tari 6 grani = £1.

The Sicilian dollar or scudo of 2 florini, 12 tari, 24 carlini, 180 ponti, or 240 grani, is worth 3s. 11½d. sterling. The Sicilian tari and carlini are thus of only one-half the value of the same denominations in Naples.

Since 1818 the coinage of Sicily has been the same as that of Naples.

Bills on London are commonly drawn at 3 months' date. No days of grace are allowed.

The Revenue, derived principally from a land-tax of 12½ per cent., a tax of 13 taris 12 grains per salma on the grinding of corn, and customs and navigation dues, amounts annually to about £1,000,000, gross. [NAPLES.]

SIERRA LEONE. [NIGRITIA.]

SILK (Du. *Zyde*. Fr. *Soie*. Ger. *Seide*. It. *Seta*. Por. & Sp. *Seda*. Rus. *Schelk*), a soft shining filament, the product of several species of caterpillar, particularly the *Bombyx mori* or silkworm. This worm is about six or eight weeks in arriving at maturity, during which period it changes its skin four or five times; and ceases to feed for a short time previous to each change. When full grown it eats no more; but, choosing a convenient place, begins to discharge viscid pulpy twin filaments from the double orifice of its nose, with which it instinctively envelops itself as a defence against living enemies and a change of temperature; and it continues this operation till it has spun an oval case or ball, in which it remains as a chrysalis for about fifteen days, at the close of which it perforates the end of the silken ball, and comes out a winged moth, to deposit its eggs for a fresh generation, and very soon after to die. Those who cultivate the worm for silk do not suffer it to reach this last stage, because the silken fibre would be cut into small pieces, by the opening at which the moth escapes. When the whole quantity of silk is formed, they destroy the chrysalis by means of heat.

Silk occurs in various forms. *Cocoons*, *Knubs*, or *Husks*, are the balls as formed by the worm, about the size of a pigeon's egg, and of a golden-yellow colour. *Raw silk*, the state when simply wound off the cocoons into skeins or hanks, is in threads composed of several fibres, united by their natural gum. *Waste silk* is that part which is first wound off the cocoons in the operation of reeling; and such cocoons as being eaten through by the worm cannot be wound off by the reel, but are afterwards carded and spun; also of short ends arising from winding.

Raw silk, before it can be used in weaving, is made to take one of three forms: 1*st*, *Singles*, the most simple process, consists in merely twisting the double thread projected from the twin orifice in the nose of the insect, in order to give more firmness to its texture: 2*d*, *Tram*, formed by twisting together, not very closely, two or more threads of raw silk; and this description most commonly forms the weft or shoot of manufactured goods: 3*d*, *Organzine*, principally used in the warp, that is, to form the length of the web, is composed of two or more threads twisted separately, and afterwards combined together, the twist being then given in contrary directions. When thus prepared it is termed *thrown silk*.

The worms are fed with the leaves of the mulberry-tree; and they are reared in a kind of nursery, called by the French a *magnanière*. Silk husbandry is extensively prosecuted in the south of Europe—in Italy, where the annual production is about 12,000,000 lbs., chiefly in the northern states, and in France; also in China, India, and Persia. It is likewise pursued on a smaller scale in many other countries possessing a soil and climate favourable to the growth of the mulberry. The Indian silk, produced from a worm and leaf peculiar to Bengal, is inferior to that of France, Italy, and China, all produced from the *Bombyx mori*, reared on the white mulberry.

About 5,000,000 lbs. raw, waste, and thrown silk are annually consumed in this country. It is imported chiefly from Bengal, and from Italy, either direct or through France; it is also brought in considerable quantities from China (where, next to tea, it is the great staple) and Turkey; and in smaller quantities from Holland, the United States, and other places. [SILK MANUFACTURE.]

SILK GUT, a hard, white, transparent thread, about a foot in length, made in China and Italy from the intestines of the silk worm, and used for angling.

SILK MANUFACTURE. This manufacture originated in China, from whence, according to the best credited accounts, it was carried to Constantinople by Persian missionaries in the reign of Justinian, A. D. 550. Its progress was at first slow, and for 600 years was confined to the Greek empire. In the 12th century, however, it was extended to Palermo in Sicily, and from thence by degrees into Italy, Spain, and eventually to France, in which it had effectually taken root prior to the reign of Francis I. Its early history in England is involved in obscurity; but the reign of Edward III. is commonly assigned as the period of its introduction into this country. It attained a certain extent in the 16th century, particularly in the days of Elizabeth, when a number of Flemish workmen settled in her dominions in consequence of the persecutions of the Duke of Alva; and a further stimulus was given to it in 1685, by the repeal of the Edict of Nantes, and the removal in consequence of a number of French Protestant weavers to England. Numerous laws were passed for the protection and encouragement of the manufacturers; and in 1765, the importation of foreign silks was strictly prohibited. This law gave to the English manufacturers a monopoly of the home market, from which, in the then imperfect condition of the trade, they would have been driven by foreign competition; but it did not secure to them prosperity. By withdrawing a powerful incentive to economize the processes, silks continued a high-priced luxury, accessible only to the wealthier classes, and of course liable to all the caprices of fashion; while the imposition of heavy taxes on the raw material, and the competition of the smuggler, tended farther to increase the evil. Under the combined influence of these causes the trade increased slowly; those who embarked in it were exposed to continued alternations of prosperity and distress; and down to 1824, the silk manufacture, notwithstanding all the protection it had received, could not be said to be firmly established. In that year, however, influenced by the suggestions of Mr Huskisson, a bold and enlightened policy was adopted by our government. The high duties of 4s. per lb. imposed upon raw silk, and of 14s. 8d. per lb. upon undyed thrown silk, were reduced; the former to 3d., and the latter to 7s. 6d. per lb.; and in 1829, to the rates of 1d. and 3s. 6d. respectively. The prohibitory act of 1765 was also repealed, and a scale of duties adopted (equivalent to 30 per cent. *ad valorem*), under which foreign manufactured silk goods might be imported after July 5, 1826. In the tariff of 1842, the duty on undyed thrown silk was farther reduced to 1s. the lb.; but no alteration was made on the rates on manufactures.

The consequence of Mr Huskisson's reductions was a great and sudden increase of the silk-trade. The manufacturers at first suffered severely from foreign competition; but this evil was partial and temporary. Stimulated by that rivalry, such improvements were effected in the quality of our fabrics as rendered them equal, and in some cases superior, to the most beautiful productions of other countries. At the same time, by the reduction of the cost of the raw material, and by conducting the several processes upon a scale, and according to principles, admitting of great economy, British silks have not only been placed within the reach of the humbler classes, but in other markets have been brought into successful competition with those of foreign production.

As this country is entirely dependent upon foreign states for the supply of the raw material, the quantity of goods made must be proportional to the unmanufactured silk imported. In the 10 years preceding 1824, the quantity of raw and thrown silk used amounted to 19,409,020 lbs., being an average of 1,940,902 lbs. per annum; and in the 12 years following the change of system, the quantity used was 49,973,331 lbs., or 4,164,444 lbs. per annum, being an increase over the average of the former period of 114 per cent. (*Porter's Progress of the Nation*, § 2, ch. ii. p. 256.) It is further remarkable that, notwithstanding this increase, the importation of thrown silk has of late sensibly diminished. The spur of competition has led to the introduction of improved machinery into our throwing mills, the effect of which has been to lessen by more than one-half the cost of the process. Both branches of the manufacture have been thus prodigiously expanded; so that in every article of plain manufacture, and of what are called heavy goods, we have now little to apprehend from the free competition of our neighbours; while in regard to mixed goods, composed partly of worsted or cotton and silk, we stand without a rival. It is chiefly in light and fancy articles, the work on which is proportionally greater with reference to their value than where a larger quantity of material is used, that the competition of foreigners, owing to their cheaper rate of labour, is successful. The Lyonese manufacturer is, besides, entitled to a preference for his fancy goods, as a reward for the superior taste and ingenuity displayed by him in the invention of patterns and the combination of colours. This superiority is owing chiefly to the gratuitous instruction which is afforded to the work-people in drawing and designing in a great school of arts at that city; but the increasing attention now paid to these subjects in this country, affords reason for hoping that, even in the fancy department, the British manufacturer will not be long behind his foreign competitors.

The numerous fabrics woven from silk may in general be classed under the head of *Broad Silks*, comprehending velvets, damasks, satins, levantines, ducapes, gros-de-naples, sarcenets, persians, gauze, &c.; *Crapes; Handkerchiefs*, embracing bandanas, barcelonas, and similar textures; *Ribands; Hose and gloves; Mixed goods*, comprehending bombazines, poplins, lustres, shawls, and all the fabrics in which silk forms a component part. [See these different heads.] Silk is, besides, used in the manufacture of a number of small articles.

A variety of processes are followed. In weaving plain goods, a simple loom is employed, which in construction does not materially differ from that used for other fabrics; but figure-weaving, or the art of producing various patterns in the cloth, is generally performed by a loom invented by M. Jacquard, an ingenious but unfortunate weaver of Lyons. The Jacquard loom was introduced into this country; and as by its means the most beautiful products can be accomplished by men of ordinary skill, and with little more labour than that required for the plainest goods, it has entirely taken the place of every other method of figured silk weaving. Power-weaving is employed for the production of both broad silks and ribands; but owing to the delicacy of the texture of silk, it is not considered susceptible of much extension in any save common articles. It is prosecuted chiefly in factories in Cheshire, Lancashire, and Norfolk.

The principal seats of the manufacture in this country are,—for broad silks, Spitalfields, Manchester, Macclesfield, Glasgow, Paisley, and Dublin; for crapes, Norfolk, Suffolk, Essex, Middlesex, and Somerset; for handkerchiefs, Manchester, Macclesfield, Paisley, and Glasgow; for ribands, Coventry; for hosiery, Derby; and for mixed goods, Norwich, Manchester, Paisley, and Dublin. The annual value of the manufacture is estimated at nearly £10,000,000; more than 9-10ths of which are for home consumption.

The foreign states in which the manufacture chiefly exists are China, India, France, Italy, and Switzerland. The importations into this country are almost wholly from France and India; the former consisting chiefly of plain and figured silks, ribands and gauzes, millinery and made-up goods, with a small quantity of crape and velvet; the latter chiefly of bandanas and other handkerchiefs. Only about 1-5th of the importations from India is entered for home consumption, the remainder being re-exported to France, Germany, Spain, and America.

Progress of the Silk Trade of the United Kingdom from 1827 to 1840.

	1827.	1830.	1835.	1840.
French or European silks (exclusive of lace and millinery) entered for home consumption.......................*lbs.*	115,278	126,370	160,840	243,246
India silks: Bandanas, romals, &c., do., *pieces*,	55,183	77,953	162,827	100,838
———— Crape, shawls, scarfs, gown pieces, &c., do..........*No.*	24,200	17,620	2,740	463
———— Taffeties, &c., do......*pieces*,	18,150	2,978	1,813	1,290
Raw and waste silk, do..............*lbs.*	3,759,138	4,256,982	5,406,846	4,531,115
Thrown silk, do......................*lbs.*	454,015	436,535	251,370	288,147
British silk manufactures exported: declared value........................£	236,344	578,048	973,786	792,648

The exports of British silks are chiefly to the United States and the Colonies; they are also shipped to S. America, Germany, Belgium, and even India and France; to which last, goods to the amount of about £50,000 are now sent annually.

The duty on thrown silk is drawn back on the exportation of the goods into which it is converted —3 & 4 Wm. IV. c. 58, §§ 9, 10, and 11. (This drawback repealed by 5 & 6 Vict. c. 47, § 56.)

For further information, we must refer to the volume "Silk Manufacture" of *Dr Lardner's Cabinet Cyclopædia*, and to Dr Ure's *Dictionary of Arts, Manufactures, &c.*

SILVER (Fr. *Argent.* Du. *Zilver.* Ger. *Silber.* It. *Argento.* Por. *Prata.* Rus. *Serebro.* Sp. *Plata.* Per. *Nokra*), a metal of a beautiful white colour and great lustre. Sp. gr. 10·5. In malleability and ductility it exceeds all metals except gold. It may be extended into leaves not exceeding 1-10,000th of an inch in thickness, and drawn into wire finer than a human hair. Fusing point, 1873° Fahrenheit. Silver is one of the metals which have been longest known; and its uses are numerous and important. Alloyed with copper, it is employed throughout the world for coins, and in the manufacture of a variety of articles of household furniture and ornament, for which purpose it is well adapted by its great unalterability. In the arts it is extensively used, particularly for silvering or plating other metals. The oxide of silver is used for colouring porcelain. The nitrate of silver is the strongest and most manageable caustic known in surgery.

Silver occurs in the metallic or *native* state in fine filaments, disseminated through rocks, but chiefly in veins in primitive and secondary mountains. It also occurs in combination with other metals, and with sulphur. The great source of supply is Mexico; but considerable quantities are also obtained in Peru, and other parts of South America, Russia, Austria, and Norway. In England it is found in small quantities in the lead mines. [BULLION. COIN. PLATE.]

SIMARUBA, the tough, fibrous, bitter bark of the *Quassia Simaruba*. It is imported in bales from the W. Indies; and its infusion is used as a tonic.

SINGAPORE, a small island at the eastern extremity of the Strait of Malacca, the site of a flourishing British settlement. Length, 25 miles; breadth, 15; area, 270 sq. miles. The town is situate in lat. 1° 17′ N., and long. 103° 51′ E. Population, 35,000, mostly Chinese and Malays. The island belongs to the East India Company.

This settlement was projected by Sir Stamford Raffles in 1818 as an emporium for the commerce of the Eastern Islands,—the British intercourse with which had materially suffered by the restoration of Java to the Dutch at the close of the war. The island was purchased from the Princes of Johore in 1819, and its sovereignty confirmed to Great Britain in 1825, by a convention with these princes and the King of Holland. Its climate is highly salubrious, being freshened with sea breezes. The rainy months are the coldest, namely, December and January; and the driest months, April and May, the hottest. Being, however, not above 80 miles from the equator, there is little variety in the seasons, and Fahrenheit ranges only from about 70° to 90°. Fruits, catechu or gambier, and a few spices, are the only vegetable productions of the island deserving of notice; and the preparation of pearl sago and iron implements by the Chinese are almost the sole manufactures. Singapore derives its importance solely from being an *entrepôt* for the commerce between Eastern and Western Asia, and also between the latter and Europe. For this it is admirably suited by its geographical position, being in the direct track of vessels going betwixt the Indian and Chinese seas, and in the immediate vicinity of the Malay peninsula and the richest of the Indian islands. When founded in 1819 it was inhabited by only a few hundred Malay fishermen; but in a very few years it became, next to Batavia, the greatest port in the Eastern Archipelago.

The town is situate on a salt creek near the W. part of a bay on the S. coast. Ships lie in the roads at the distance of from one to two miles according to their draught; but cargoes are discharged or taken in with safety by means of lighters. All provisions, except fish, are dear. Singapore is in every respect a free port, there being neither import or export duties, nor harbour or shipping dues. The mode of transacting business is described by Mr Crawfurd as simple and efficient. The European merchants, or rather factors, most of them acting on commission, do not trust their affairs to native agents, but transact them in person, with the occasional assistance of a Chinese creole as an interpreter and broker.

There is scarcely a port whose trade is so diversified as that of Singapore. The chief Asiatic productions to be found in its market are gold dust, pepper, Banca tin, edible birds' nests, coffee, raw silk, sugar, tortoise-shell, bêches-de-mer, cassia, sago, ebony, catechu, rattans, and a multitude of other articles, the produce of the countries described under the heads EASTERN ISLANDS, SIAM, ANNAM, and PHILIPPINES, which are re-exported, principally to England, China, and India, in exchange for British cottons, woollens, iron, hardware, firearms, Chinese articles and Indian piece goods, opium, &c. Of late years the aggregate amount of imports and exports has been about $15,000,000, or nearly £3,200,000.

The intercourse with China, the Eastern Peninsula, and islands in the Archipelago, is conducted by natives in junks, proas, and craft of the most varied description,—every year showing an addition to their number and to the places in which they have been equipped. If to these be added the European, Indian, and American vessels, the whole amount of shipping annually entering Singapore is considerably upwards of 200,000 tons.

MEASURES, MONEY, &c.

Measures and Weights.—The covid, cloth measure, = 18 Imp. inches. The gantang of 2 bamboos, by which liquids, grain, and fruit, are sometimes sold, = 1¼ English gallon, or 1·04 Imp. gallon. The common weight is the Chinese pecul of 100 catties, or 1600 taels, = 133⅓ lbs. avoirdupois. Salt, rice (from Siam and the Malayan archipelago), and sago, are sold by the koyan of 40 peculs. Bengal rice and corn are sold by the bag containing 2 Bengal maunds, or 164$\frac{4}{11}$ lbs. avoirdupois. Piece goods are sold by the corge or score. The gold and silver weight is the buncal, which weighs 2 dollars, or 832 troy grains. British measures and weights are generally employed in the sale of European commodities.

Money.—Accounts are stated in Spanish dollars divided into 100 cents; also in rupees, annas, and pice, as in INDIA. Bills are commonly drawn on London at 6 months' sight; and on Calcutta, Bombay, Madras, Batavia, and Canton, at 30 days' sight.

SINKING FUND. [INTEREST (COMPOUND) AND ANNUITIES.]

SIZE, a gelatinous substance, obtained from parchment shavings, fish skin, and several animal membranes. It is less adhesive than glue; and is used by bookbinders, paper-hangers, and painters. Sometimes it is mixed with flour and gum.

SKATE or RAY, a flat fish (*Raia*), of a rhomboidal form, with a long narrow tail. Eight or nine distinct species frequent the British coasts.

As food, the skate is held in very different degrees of estimation in different places. In London, particularly, large quantities are consumed, and the flesh is considered delicate and well flavoured; but in some parts of the coast it is seldom devoted to any purpose beyond that of baiting pots for catching crabs and lobsters. Skate are in the best condition for the table during autumn and winter. In spring, and in the early part of summer, they are usually maturing eggs or young; and their flesh is then soft and woolly. The French are great consumers of skate.

SKINS (Fr. *Peaux*. Ger. *Felle*. It. *Pelli*. Por. *Pelles*. Sp. *Pieles*), as distinguished in commerce from Hides, are those—such as calf, goat, kid, and lamb skins—which, when prepared, are used in bookbinding, glove-making, and other lighter descriptions of leather-work. Calf and kip skins are largely imported from Russia and Germany. *Kip* is a term used in trade to distinguish heifer-skins, or such as are between the ox and cow hide and the calf-skin. Goat-skins are brought chiefly from Morocco and other parts of Barbary, Cape of Good Hope, India, France, and Germany. Kid-skins are extensively imported for the glove-manufacture, both in a dressed and undressed state; the former solely from France, the latter mostly from Italy and India. Lamb-skins are brought in considerable numbers—from 1,500,000 to 2,000,000 annually—from Italy and the adjoining islands. The chief other kinds which enter into our import-trade are deer-skins from the United States, and seal-skins from British America. [Fur Trade.]

SLATE (Fr. *Ardoise*. Ger. *Schiefer*), a laminated stony substance, of which there are many kinds; though the only one of commercial importance is *clay-slate*, employed for roofing. It is also used in large slabs to form cisterns, for shelves in dairies, for paving the floors of cellars and warehouses, and for other purposes for which its strength, durability, coolness, and the ease with which it can be cleaned, owing to its non-absorbing property, adapt it: some fine varieties, rubbed smooth with sand, are likewise employed as a writing material, forming the well-known school-slate. The principal slate-quarries in Britain are in Wales, Cumberland, and Scotland; the most extensive being in Carmarthen, near Bangor, and at Easdale and Ballachulish in Argyllshire.

The chief other kinds are, *Polishing-slate*, a light brittle substance of a cream-yellow colour, found at Zwickau in Saxony, Bilin in Bohemia, and Auvergne; and *Drawing-slate*, of a grayish-black colour, used for crayons, the best kinds of which are found in Spain, Italy, and France.

SLAVE-TRADE. "The principle of co-operation," according to Mr Wakefield, "explains the origin of slavery, the abolition of slavery in some countries, and the steady progress which slavery is making in others." "All nations, or nearly all, have undergone the state of slavery, sometimes making slaves of the people of the country, sometimes obtaining slaves by means either of purchase from other nations, or of war; and it is equally remarkable, that wherever population has increased so as to render land scarce, so as to provide for the combination of free labour, slavery has either assumed a very mild form, or has been wholly abolished. It is also remarkable, that slavery was revived in America by nations which had lately abolished it in Europe. Bodies of emigrants from Spain, England, and other European countries, settled in America, and took possession in every case of such a quantity of land, that there was enough, and more than enough, for all the settlers. With such abundance of land that every one could readily obtain a piece for himself, there would have been little combination of labour amongst these people, if they had not obtained slaves who might be compelled to help each other. All of these bodies of settlers did obtain slaves of one sort or other; either red men, the natives of the country, or black men purchased in Africa, or criminals transported from Europe, or Europeans, not criminals, who were kidnapped and sold like the black natives of Africa." (*Edition of the Wealth of Nations by the Author of England and America*, vol. i. p. 45-47.)

The practice of purchasing African negroes for the purpose of employing them in the mines and plantations of America, was begun by the Portuguese in 1503, and it gradually increased with the extension of European settlements in the New World. In course of time, the atrocities with which it was attended attracted the notice of philanthropists; and in 1788 they were brought before the House of Commons by Mr Wilberforce; through whose exertions, aided as they were by several of the most eminent statesmen of the day, and supported throughout the kingdom by the powerful agitation of Thomas Clarkson, Zachary Macaulay, and others, chiefly members of the Society of Friends, an act was passed, March 25, 1807, prohibiting slave-trading in the British colonies from and after January 1, 1808. This statute, however, merely subjected offenders to pecuniary penalties; and it is only since 1811, when, by Mr Brougham's exertions, slave-trading was enacted to be felony, that it has entirely ceased in our colonies.

At the close of the war (1814-15), the British government endeavoured to obtain the concurrence of foreign powers in the abolition; and eventually the whole of them passed laws prohibiting the traffic. They all likewise agreed to a mutual right of search, except the United States; though this power was the first to prohibit the importation of negroes.

The exertions of the abolitionists in Britain were then directed with augmented energy against the existence of slavery itself; which at length was abolished throughout the colonies by the statute 3 & 4 Wm. IV. c. 73, which enacted, that on August 1, 1834, the slaves then existing were to become apprenticed labourers; the term of their apprenticeship being fixed to expire partly on August 1, 1838, and partly on August 1, 1840, when they were to become altogether free. To attain this mighty object, there was voted to the planters, as compensation, the sum of £20,000,000; which was distributed as follow.

	Average Value of a Slave from 1822 to 1830.			Number of Slaves.	Relative Value of the Slaves.			Share of the L.20,000,000 to each Colony.		
	L.	s.	d.		L.	s.	d.	L.	s.	d.
Bermuda	27	4	11¾	4,203	114,527	7	5¼	50,584	7	0½·41
Bahamas	29	18	9¾	9,705	290,573	15	3¾	128,340	7	5¾·47
Jamaica	44	15	2¼	311,692	13,951,139	2	3	6,161,927	5	10¾·58
Honduras	120	4	7½	1,920	230,844	0	0	101,958	19	7½·92
Virgin Islands	31	16	1¾	5,192	165,143	9	2	72,940	8	5¼·76
Antigua	32	12	10½	29,537	964,198	8	10½	425,866	7	0¼·13
Montserrat	36	17	10¾	6,355	234,466	8	0¼	103,558	18	5 ·38
Nevis	39	3	11¾	8,722	341,893	6	3½	151,007	2	11¾·35
St Christophers	36	6	10¼	20,660	750,840	7	1	331,630	10	7¼·82
Dominica	43	8	7½	14,384	624,715	2	0	275,923	12	8½·90
Barbadoes	47	1	3½	82,807	3,897,276	19	0½	1,721,345	19	7 ·87
Grenada	59	6	0	23,536	1,395,684	16	0	616,444	17	7 ·15
St Vincents	58	6	8	22,997	1,341,491	13	4	592,508	18	0¼·95
Tobago	45	12	0½	11,621	529,941	16	2½	234,064	4	11¾·55
St Lucia	56	18	7	13,348	759,890	10	4	335,627	15	11¾·19
Trinidad	105	4	5¼	22,359	2,352,655	18	0¾	1,039,119	1	3½·11
British Guiana	114	11	5¼	84,915	9,729,047	13	5¼	4,297,117	10	6½·31
Cape of Good Hope	73	9	11	38,427	2,824,224	7	9	1,247,401	0	7¾·76
Mauritius	69	14	3	68,613	4,783,183	15	3	2,112,632	10	11¾·06
								Deficient fractions		·08
				780,993	45,281,738	15	10¼	20,000,000	0	0

Besides Great Britain, the northern states of the N. American Union, and the Spanish American republics, have emancipated their negroes; but slavery still exists in most other parts of the western hemisphere. According to the latest accounts, the number of slaves in the southern states of the N. American Union is 2,500,000; in Brazil, 3,000,000; and in Cuba, Puerto Rico, and other places, 520,000; in all which there is of course still an extensive traffic.

In addition to this internal trade, however, negroes are extensively imported into Brazil, Cuba, and other places, notwithstanding the treaties to the contrary, and the maintenance by Britain of cruisers for the purpose of securing their fulfilment. This illicit trade is chiefly followed on the African coast, between the Niger and Angola; and its extent shows that it must be connived at by the local authorities of those states, or that they are unable to prevent it. It is further to be regretted, that, since the slave-trade has been declared illegal, the sufferings of the negroes have been greatly increased, owing to its being necessary to coop them up in small compass in their passage across the Atlantic, the better to avoid the British cruisers, while a pursuit by the latter often leads to their being thrown overboard. The loss of life in the middle passage is supposed to average one-fourth of the cargo; which is exclusive of that produced by the wars among the African tribes, in order to procure captives for the slavers, and by the "seasoning" of the negroes after their reaching the American main or the West Indies. The commodities given in exchange for the slaves in Africa consist chiefly of coarse arms and gunpowder, imported into Brazil and other places expressly for this infamous traffic from England and Belgium, the common cotton fabrics well known in the British manufacturing districts under the name of "coast goods," and the other articles peculiar to the African trade detailed under the head NIGRITIA.

The shipping craft employed is chiefly of the build of the United States. The negroes seized on board slave-vessels by the English cruisers are, we may add, generally carried to the British settlement of Sierra Leone.

In addition to the trade in slaves on the western coast of Africa, there is a periodical exportation of them by caravans from Soudan to the Barbary States and to Egypt. Many of these, according to Dr Bowring (*Report on Egypt*, p. 87), are boys who have been cruelly mutilated at Kordofan for employment in the harems. There is also a considerable slave-trade carried on by the subjects of the Sultan of Muscat from Zanzibar, as well as by the Portuguese from Mozambique, for the supply of various parts of the East.

For further information respecting the slave-trade, we must refer to the works of T. Clarkson, Mr Stephen, Sir T. Fowell Buxton, and others exclusively devoted to the subject. The numerous conventions on the subject between Great Britain and other powers will be found in Mr Hertslet's Collection of Treaties.

SLIP, a term applied to a place with a gradual slope on the banks of a water, suited for shipbuilding; also to an ingenious apparatus, invented and patented by the late Mr Thomas Morton of Leith, for hauling vessels up to be repaired.

Morton's Patent Slip is a cheap substitute for dry docks, where it has not been deemed expedient or practicable to construct them. A vessel, on being placed in it, is in a similar situation to one upon a building slip; and a ship may be hauled up, have her bottom inspected, and even get a trifling repair, and be launched, in the same tide. A vessel is hauled up at the rate of 2½ to 5 feet per minute, by 6 men to every 100 tons. The whole cost of a slip, with an iron capstan-wheel purchase, &c., capable of containing at least two vessels (but exclusive of expense of laying down), is, for those of 100 tons, laying-ways 250 feet long, £400; for those of 200 tons, ways 280 feet, £550; and so on according to dimension. The apparatus is portable, and possesses other advantages, as explained in the Edinburgh Encyclopædia, article *Slip*, and Rickman's Life of Telford, pp. 134, 336. Morton slips are now in operation in almost all our principal ports, as well as at Calcutta, Quebec, Marseilles, Odessa, Philadelphia, and other places abroad.

SLOOP, a vessel with one mast, like a cutter, but having a jib-stay.

SMALT (Ger. *Schmalz*), called also azure or powder blue, is a vitreous substance, procured by roasting zaffre and potashes, or by fusing cobalt ore, flints, and potashes. In either way a blue glass is formed, which is afterwards pulverized. Smalt is employed for relieving the yellow tint of writing-paper and linen, staining glass, porcelain, and earthenware, and for giving a blueish colour to starch. It is manufactured in Norway and Germany; from whence about 120,000 lbs. are annually imported into the United Kingdom.

SMELT OR SPIRLING, a small fish (*Osmerus eperlanus*, Cuv.) of the salmon kind, plentiful on the E. and W. coasts of Britain; length about seven inches. It ascends the rivers in August, and, after spawning in March or April, returns to the sea. The Medway smelts have a high reputation. The smelt is commonly in great request from its delicacy and flavour: the peculiar cucumber-like smell of this fish is well known.

SMUGGLING, contraband trading, or importing goods without paying duty. This is a practice which can only be stopped by a moderate tariff. When duties are excessive, experience has shown that an illegal traffic will be created, which no power or ingenuity can put down. At present, owing to injudicious fiscal regulations, smuggling is carried on to a greater or less extent in almost all countries. In our own it prevails chiefly in reference to the trade with France, owing to its proximity, and the high duties exacted on many of its productions; and it appears, from the Report of the Import Duties Committee, 1840, that it has been so completely reduced to a system, as to be the subject of regular charges. These, according to Mr Macgregor's evidence, are 9 per cent. upon certain qualities of silk and fine goods; while for 10 and 12 per cent. all but the heavy goods can be insured into this country (p. 13). This report likewise explains that the high protective duty on French goods, while it promotes and encourages smuggling, and consequently interferes with the revenue, does not at all secure employment to the protected manufacturers in this country; for, adds Mr Macgregor, "it is a truism which experience has proved in every country in Europe, that the moment the duty is higher than the premium for smuggling, it ceases to be protective." (*Ibid.*) The weight of these reasons was felt in framing the tariff of 1842, in which many of the former duties were lowered; and a reduction of the excessive rates still maintained on brandy and some other articles only awaits, we believe, the conclusion of a commercial treaty with France.

But the abolition of smuggling by wise and moderate legislation is desirable on higher grounds. The moral influence of the law is impaired when it first tempts to its own violation, and then punishes; for a sympathy is thereby created in favour of the breakers of it. In Spain, into which, from oppressive duties, immense quantities of merchandise are smuggled by way of Gibraltar and Portugal, no one is more popular or more interesting than the bold *contrabandista*. Multiplied evils beside flow from the bribery and corruption generated by extravagant duties. On these grounds, there are probably few reforms to which the friends of order in all countries could be more usefully directed than in establishing such fiscal regulations as should preserve illicit trade at a minimum.

In the United Kingdom, the direct cost of protecting the customs revenue, by means of a preventive guard and cruisers, is about £500,000, which is exclusive of the charges for custom-house officials. A few cruisers are also maintained on account of the excise revenue, besides an expensive revenue police in Ireland. The chief existing act for the suppression of smuggling is 3 & 4 Wm. IV. c. 53.

Vessels and boats belonging in the whole or in part to British subjects, having false bulkheads, false bows, double sides or bottoms, or any secret place adapted for concealing goods, or having any hole, pipe, or other device, adapted for running goods, are forfeited, with all guns, furniture, ammunition, tackle, and apparel; and all foreign vessels or boats, not square-rigged, coming to or arriving at any port of the United Kingdom, having on board goods liable to the payment of duties or prohibited, concealed in false bulkheads, bows, double sides or bottoms, or any secret place, are forfeited, 3 & 4 Wm. IV. c. 53, § 14.

If goods subject to any duty or restriction, or prohibited, be concealed in any manner on board any vessel, all such goods, and all other goods packed with them, are forfeited (§ 15).

Vessels of British ownership, not square-rigged or propelled by steam, and all such vessels, whether propelled by steam or otherwise, of less burden than 200 tons, of which the length is to the breadth in a greater proportion than 3 feet 6 inches to 1 foot, and all such last-mentioned vessels carrying arms, and all vessels of more than 200 tons burden, armed with more than 2 carriage guns of a calibre exceeding 4 lbs., and with more than 2 muskets for every 10 men, and all boats of such ownership, found within 100 leagues of the coast, are forfeited, unless the owners have obtained a license from the Commissioners of Customs (§ 16). [But by 5 & 6 Vict. c. 47, §§ 32 and 33, the provision as to vessels under 200 tons is, where the measurement is made by 5 & 6 Wm. IV. c. 56, to apply to vessels under 170 tons.]

Every vessel of such ownership, or whereof one-half of the crew are British subjects, is restricted in its men (officers and boys included) to the following proportions: viz., if of 30 tons or under, and above 5 tons, 4 men; if of 60 tons or under, and above 30, 5 men; if of 80 tons or under, and above 60, 6 men; if of 100 tons or under, and above 80, 7 men; and above that tonnage, 1 man for every 15 tons additional. In a lugger, the following are the proportions: if of 30 tons or under, 8 men; if of 50 tons or under, and above 30, 9 men; if of 60 tons or under, and above 50, 10 men; if of 80 tons or under, and above 60, 11 men; if of 100 tons or under, and above 80, 12 men; and if above 100 tons, 1 man for every 10 tons additional. A vessel in which these restrictions are exceeded, found within 100 leagues of the coast, is forfeited, unless especially licensed by the commissioners (3 & 4 Wm. IV. c. 53, § 17).

Boats solely employed in the fisheries, and boats belonging to square-rigged merchant vessels, and life-boats or tow-boats belonging to licensed pilots, and boats used solely in rivers or inland navigation, and in fishing on the coasts of the North and West Highlands of Scotland, and of Ireland, are not included in the above provisions (§ 23). [By 6 & 7 Wm. IV. c. 60, § 9, licenses are not required for vessels solely engaged in fishing on the coasts of Scotland.]

If goods liable to the payment of duties be unshipped from any vessel or boat (the duties not being first paid or secured), or if any prohibited goods be imported, or if any goods, warehoused in the United Kingdom, for home consumption or exportation, be clandestinely removed, all such goods are forfeited, together with all cattle, carriages, and other things, used in the removal (3 & 4 Wm. IV. c. 53, § 28). Persons making collusive seizures, or making arrangements to restore goods seized, or taking bribes, forfeit £500 for each offence, and are rendered incapable of serving in any government-office, civil or military; and any person attempting to seduce them to any such dereliction of duty, forfeits £200 (§ 33).

Every person concerned in the unshipping of prohibited or uncustomed goods, or knowingly harbouring, or suffering to be harboured, such goods or goods illegally removed from the warehouse; and every person to whose hands any such uncustomed or prohibited goods may knowingly come, or who may be in anywise concerned in their illegal removal from the warehouse, forfeits either treble value thereof, or £100, at the election of the commissioners (§ 44).

Every person who insures or undertakes to deliver uncustomed or prohibited goods, or who in pursuance of such insurance or otherwise, delivers such goods, and every aider or abettor, for every such offence forfeits £500, over and above any other penalty to which by law he may be liable; and every person agreeing to pay for such insurance or conveyance, or receiving or taking such goods into his custody, or suffering them to be so received, suffers a like penalty (§ 46). If any person offer for sale goods under pretence that they are prohibited, or have been unshipped and run on shore without payment of duties, such goods (although neither liable to duties nor prohibited) are forfeited, and the person forfeits the treble value, or £100, at the election of the commissioners (§ 47).

When goods are seized, and any dispute arises whether the duties have been paid, or they have been lawfully imported, or concerning the place whence they are brought, the proof lies on the owner, and not on the officer seizing (§ 114).

Prosecutions before the superior courts must be brought within 3 years after the cause of action, and those before justices within 6 months (§ 120). But where a person has escaped from custody, information may be laid before justices after the 6 months (§ 121).

SNOW, a vessel rigged in the same manner as a brig, except that the mainsail is attached to a small mast abaft and very near the mainmast.

SNUFF (Fr. *Tabac en poudre*. Ger. *Schnupftaback*). [TOBACCO.]

SOAP (Du. *Zeep*. Fr. *Savon*. Ger. *Seife*. It. *Sapone*. Por. *Sabao*. Rus. *Mulo*. Sp. *Jabon*), a detergent compound, made by uniting a fatty or oily body with the alkalies soda or potash ; the union of soda forming *hard*, and of potash *soft* soap. Of the former, the principal qualities manufactured in Britain are,—*white soap*, composed chiefly of tallow and soda, but, for some purposes, of olive-oil and soda ; *yellow soap*, made of tallow, rosin, and soda, adding occasionally a little palm-oil ; *mottled soap*, formed of tallow, kitchen stuff, and soda,—its peculiar appearance being communicated by dispersing the lees through it towards the end of the operation ; *brown soap*, made from palm-oil, rosin, and soda. Soft soap consists usually of potash and oil ; the latter being generally fish oil, but occasionally linseed oil and cocoa-nut oil. Besides the above, there are a variety of toilet soaps, hard as well as soft, in the preparation of which perfumes and other ingredients are employed.

In Britain, where the soap manufacture is of great importance, the hard kind is made chiefly at Liverpool and London, but in considerable quantities also at Runcorn, Bristol, Brentford, Hull, Bromsgrove, Plymouth, and Smethwick, and at Glasgow and Leith in Scotland; the soft kind is made principally at Liverpool, Glasgow, and Bradford; and a kind called silicated soap is likewise extensively manufactured at Liverpool. From the excise returns, it appears that there were made, in 1841, in England, 140,712,535 lbs. hard, 9,788,851 lbs. soft, and 3,921,862 lbs. silicated; in Scotland, 10,708,464 lbs. hard, and 4,535,030 lbs. soft; making in all 169,666,742 lbs.; which is an increase of about 30 per cent. since 1832. An allowance or drawback of duty is made on the soap used in the woollen, silk, flax, and cotton manufactures, which, in 1841, was granted on 10,190,160 lbs. hard, and 9,090,184 lbs. soft; the allowances amounting to £78,112. In the same year, the net amount yielded by the soap-duty to the public revenue was £815,864.

In Ireland, where soap is not subject to excise-duty, the manufacture is carried on chiefly at Belfast, Londonderry, Limerick, and Cork; but the quantity made is insufficient for the consumption; and, in 1841, 9,818,769 lbs. hard, and 224,728 lbs. soft, were imported from Britain, the duty on which was drawn back on shipment. The exemption of Ireland from duty leads to fraudulent practices both there and in Britain, into which Irish soap is said to be largely smuggled.

The excise duty on soap was first imposed in Britain in 1711, when it was fixed at 1d. per lb. It was raised in 1713 to 1½d. per lb.; and again, in 1782, when hard and soft soap were first distinguished, the former being rated at 2½d., and the latter at 1½d. per lb. In 1816, that on hard soap was increased to 3d. per lb. But since May 31, 1833, the duty has been 1½d. per lb. on hard soap, and 1d. per lb. on soft. In 1839, the number of soap manufacturers in England was 177; in Scotland, 19; and in Ireland, 183. Each requires an annual license, costing £4.

The soap-maker was formerly subjected to an arbitrary and vexatious interference from the excise; but of late years the regulations have been greatly improved, and there is now no superintendence of the process of manufacture, which may be conducted in any way or of any material. The existing act is the 3 & 4 Vict. c. 49, which consolidated and amended the laws for collecting the duties, repealing at same time no fewer than 17 previous acts regulating the trade.

The exports, chiefly from Liverpool, amounted, on an average of the three years to 1841, to about 20,000,000 lbs., consisting almost wholly of hard soap. The improvements consequent on a relaxation of the excise interference have, of late years, exercised a favourable influence on this as on every other department of the trade. The imports of foreign soap amounted, in 1841, only to 384 cwts. hard, and 41 cwts. soft; but great reductions of the customs duties were made in 1842, and the importation in future will probably be more considerable.

SODA (Fr. *Hydrate de soude*. Ger. *Aetznatron*), an alkaline substance, the protoxide of sodium of chemists, is found native in mineral seams or crusts in Egypt, in which it is called *natron* ; but in this country it is commonly obtained pure by boiling a solution of the carbonate with half its weight of quick-lime. In its original state it is of a gray colour, fracture vitreous ; but by the addition of water it becomes white, crystalline, and volatile, and is then the substance commonly called *pure* or *caustic soda*, but more properly the *hydrate*. Soda is very seldom used in a separate state. In commerce it generally occurs as a carbonate, either pure, or in the impure forms of BARILLA and KELP.

SODA, CARBONATE OF (Ger. *Kohlensaures natron*), commonly called *soda*, is found native near Tripoli, from whence it is exported under the name of *trona*; also in soda lakes in Hungary and Venezuela. But the British market is wholly supplied with carbonate, either in the impure forms of barilla and kelp, as just noticed, or, as has been chiefly the case since the reduction of the salt-duty, by that prepared from the sulphate of soda. The latter is now largely manufactured at a very cheap rate, and of extreme purity; and Mr Brande states, that in many of the arts it has been substituted for potash. Carbonate of soda is strongly alkaline in taste, and it changes vegetable blues to green. It is soluble in less than its weight of boiling water, and twice its weight of cold. When exposed to the air it effloresces.

SODA, SULPHATE OF, called also *Glauber's salt*, is abundantly produced in the manufacture of muriatic acid, and of chlorine by the action of sulphuric acid upon common salt. Large supplies are furnished by the manufacturers of bleaching-powder. It is also a natural product, and occurs in many mineral waters. Sulphate of soda crystallizes from its aqueous solution in large prisms, transparent, and efflorescent when exposed to air; its taste is saline and somewhat bitter; and it is soluble in rather less than three times its weight of cold water. It is often made expressly for the production of soda and the carbonate.

The carbonate of soda is an article of the greatest importance in the soap, glass, and other manufactures. Both it and the sulphate are likewise employed in medicine. They are extensively manufactured in the United Kingdom; and besides the demand for home consumption, considerable quantities are sent to the United States and other places.

SOLE, a species of flounder (*Solea vulgaris*), common on the British coasts: those of the S. and W. are much larger, and considered otherwise superior to those of the N. and E. The principal fishing ground is along the S. coast from Sussex to Devonshire, particularly at Brixham and Torbay. Soles are in season from May till November.

SOUND, a strait between Sweden and the Danish island of Zealand, which forms the principal channel of communication betwixt the North Sea and the Baltic. A toll or tribute, called the "Sound dues," is levied by the King of Denmark on all merchant-vessels passing this strait, or the two Belts, at the town of Elsineur, situated on the W. side of the narrowest part of the Sound, about 20 miles N. from Copenhagen, and at which they are required to anchor while effecting a clearance.

The dues are levied on both foreign and Danish vessels, according to a fixed tariff. It is adjusted chiefly according to the quantities of the goods; and amounted formerly to from 3-4ths to 1 and 1-4th per cent. on their value; but by a treaty between Great Britain and Denmark, concluded in 1841, a new tariff has been agreed to, in which there are several important modifications, and the dues on the cargoes of British vessels (even when shipped at ports not British) may be now reckoned at about 1 per cent. *ad valorem*, which indeed is the rate fixed for cotton manufactures, spices, and non-enumerated articles. Besides the Sound toll, there are levied light dues, at the rate of 4½ specie dollars per vessel (above 40 tons) when laden, and 2½ specie dollars when in ballast, each time they are passing the Sound or Belts; also a variety of small fees.

The duties, light-money, and other exactions, are levied in specie rixdollars of 48 stivers; reckoning the specie rixdollar at the rate of 9¼ to the Cologne mark weight of fine silver, which makes its value about 4s. 5d. sterling. It is, however, understood that the notes issued by the Danish National Bank are to be received in payment at the current exchange.

The revenue derived by Denmark from the Sound toll amounts to nearly £200,000 per annum. The dues, though levied for the ostensible purpose of maintaining lighthouses on the coast, appear to have originated in an ancient claim by the Danes to the exclusive privilege of navigating the Baltic, as the Genoese did the Black Sea. They have been the origin of many quarrels, and cost more money than, if sunk at a very low interest, would have produced a much higher revenue. Betwixt 1348 and 1659, they caused continual disturbance, leading, on two occasions, to the burning of Copenhagen, and to the repeated destruction of the Danish fleet. In 1659, the Danes were obliged by the English, Dutch, and French, to fix the duties according to a moderate tariff. Yet even in last century they were the subject of altercation with both Sweden and Holland. Considerable surprise has often been expressed at the tacit submission of the naval powers of Europe to the payment of the Sound dues; but they seem to consider, either that the length of time during which they have been submitted to has settled the question of right, or that the amount of impost and its annoyances to trade are compensated by the advantages to navigation.

The number of ships which passed the Sound, and cleared at Elsineur, in 1837, was 13,102, in burden 2,033,706 tons; including 3417 British vessels, in burden 655,447 tons.

The only other water communications betwixt the North Sea and the Baltic are, the strait called the Great Belt, betwixt the islands of Zealand and Funen; the Little Belt, betwixt Funen and the continent; the Sleswick Holstein, or Eyder Canal, opened in 1784; the Steckinitz Canal, betwixt the Elbe and the Trave; and the Gotha Canal, in Sweden. The navigation of the Great Belt, being circuitous and difficult, on account of sand-banks and rocks, is frequented almost solely by Danes; of 2107 vessels which passed this strait in 1836, only 4 were British. The Little Belt, in some parts only about 4000 feet wide, is extremely hazardous, and seldom used.

SOUTH AUSTRALIA, a British colony extending from 132° to 141° E. long., and from the S. coast, including the adjacent islands, northwards to the Tropic of Capricorn. Area, 300,000 sq. miles. Public affairs are administered by a governor appointed by the crown, but a local constitution may be framed when the population shall amount to 50,000.

The coast of this part of Australia, discovered by Flinders in 1802, was first regularly settled in 1836, when the capital, *Adelaide*, was founded in lat. 34° 57′ S., long. 138° 43′ E. to the E. of Gulf St Vincent, and distant 6 miles from a creek affording good accommodation for shipping. Little is known regarding the interior, which, however, appears generally to resemble NEW SOUTH WALES, in being adapted rather for pasture than for cultivation. By the act of constitution, it is to be governed only by laws expressly enacted for it; is in no case to be employed as a convict settlement; and no public lands to become private property, except by purchase at a fixed minimum price, or as much above it as may be determined by auction. "The whole of the purchase-money of waste or public land to be employed in conveying labourers, natives of the British isles, to the colony." And the disposal of public lands and management of the emigration fund, was vested in crown commissioners. An extensive joint-stock concern, called "The South Australian Company," was afterwards formed, having for its objects the purchase of land and the promotion of emigration; and who grant leases to experienced farmers.

The usual course of trade is similar to that at the Port Phillip settlement. In the five years 1836-1840, 137 vessels, having an aggregate burden of 52,481 tons, and carrying 12,370 emigrants, were despatched from the United Kingdom to this colony.

SOUTH SEA COMPANY, an association formed in London in 1711, avowedly to trade in the South Seas, but chiefly in reality to afford financial aid to the government, whose obligations they received as capital stock. The amount thus created was £9,471,325, increased in 1715 to £10,000,000, on which the company received 6 per cent. interest, besides £8000 a-year for management. In 1720 was passed the celebrated South Sea Act, authorizing the company to take in by purchase or subscription both the redeemable and unredeemable public debts, with the view of reducing them all under one head of account at a uniform interest. A full account of the *South Sea Bubble*, and of the numerous projects generated by the speculative phrensy which prevailed in England in 1720, will be found in

M'Pherson's Annals of Commerce, vol. iii. p. 90. It may be sufficient to notice here, that the stock of the company, after many changes before 1733, was then adjusted, and has since remained, at £3,662,784, 8s. 6½d. [FUNDS.]

SOVEREIGN, an English gold coin first minted by Henry VII., 1485. Its value varied at different times; and in 1666 it was superseded by the guinea. The sovereign was again struck in 1816, since which it has been the principal gold piece of the United Kingdom. It is minted 22 carats fine, and at the rate of £3, 17s. 10½d. per troy ounce; hence its full weight is 5 dwts. 3·274 grains; but the sovereign of 5 dwts. 2¼ grains, and the half-sovereign of 2 dwts. 13⅛ grains, are allowed currency by royal proclamation, June 7, 1842. [COIN.]

SOY, a peculiar savoury sauce made from the bean of the *Soja*, a species of *Dolichos* growing in the eastern parts of Asia. Genuine soy is well flavoured, thick, brown, and clear; and when shaken in a glass, it should leave a coat on the surface of a bright yellowish brown colour. It is imported from Canton, but the best is brought from Japan by way of Batavia.

SPAIN, a European kingdom lying between lat. 36° and 43° 46′ N., and long. 3° 20′ E. and 9° 10′ W.; bounded N. by Bay of Biscay and France; W. by Portugal and the Atlantic; and S. and E. by the Straits of Gibraltar and the Mediterranean. Area, 183,000 sq. miles. Population, 12,500,000. Capital, Madrid, an inland city, pop. 183,000. Government, a constitutional monarchy: the legislative power is vested in the king (or queen) and the cortes composed of two co-legislative bodies,—a senate nominated by the sovereign from a triple list proposed by the provincial electors, and a congress of deputies chosen by the provinces at the rate of 1 for each 50,000 of the population. The elections are triennial; one-third only of the senators, however, going out at each period.

Spain, next to Switzerland, is the most mountainous country in Europe. The lofty Pyrenees forming its N.E. barrier, are continued through the N., where they receive the name of the Cantabrian chain, running parallel to the Bay of Biscay, and terminating in Cape Finisterre. The remainder of the country may be considered generally as a series of mountain-terraces, which projecting successively their rugged edges towards the S. present a flight of gigantic steps from the Pyrenean range to the Mediterranean. But the central portion, comprising the greater part of the provinces of Old Castile, New Castile, Leon, and Estremadura, is an elevated table-land, averaging from 2000 to 3000 feet above the level of the sea. The singular configuration of Spain renders its climate various. In the low grounds, the heat during summer is excessive; in the elevated regions the temperature is cooler; and the interior is subject to piercing winds, which prevent the production of many fruits that thrive in the more northern latitudes of Italy.

The chief rivers of Spain are the Ebro, Douro, Tagus, Guadalquivir, and Guadiana, some of which run several hundred miles, but owing to the aridity of the table-land, and the adjoining tracts, in which they almost all rise, they contain little water; they are besides impeded by rocks, shallows, and cataracts; and only a very few are navigable for small boats, and that commonly near their mouths. But though nearly useless for the purpose of inland communication, they are of importance for the irrigation of the ground,—a practice nearly general in the countries bordering the Mediterranean, and in the basin of the Guadalquivir. In the table-lands, irrigation cannot be introduced, owing to the depth of the river courses; and in the N. and N.W. maritime provinces it is unnecessary, from the abundance of the rains.

The soil is in general fertile, especially where irrigation has been employed; and the vales on the E. coast are remarkable for their perpetual succession of crops. But agriculture, except in Biscay, Navarre, and Arragon, and in the *huertas*, or irrigated lands of Granada, Murcia, and Valencia, is in the most backward state imaginable. The most common kinds of grain are wheat, maize, barley, and rice; the wheat is raised chiefly in Catalonia, Old Castile, and Leon; and the rice in the N.E. provinces. Hemp and flax are cultivated principally in the basin of the Ebro; madder and saffron on the table-land of Cuença; and the sugar-cane and cotton in the S. districts. The usual products of southern latitudes, namely olives, figs, vines, oranges, and lemons, also abound. And to these have to be added barilla, silk, honey, liquorice juice, cork, and esparto or sedge. The Pyrenees, Asturian Mountains, and the Sierra Morena, possess luxuriant forests; but on the whole, Spain has less timber than any other extensive country of Europe.

Of domestic animals, the most important are sheep, especially the merinoes or fine-woolled breeds, which pass the winter in the plains of Andalusia, Castile, Leon, and Estremadura, and remove in summer to the nearest mountains, chiefly the Sierras de Guadarama, Avila, and Gata. This migrating system, which originates in the physical state of the country, is an important part of the rural economy of Spain, and is governed by peculiar and in many respects oppressive customs and laws. The number of sheep is estimated at nearly 14,000,000. Goats also are numerous; and the asses and mules are distinguished for their size and beauty. Spain was formerly celebrated for her horses, especially those of Andalusia; but few of the finer breeds now remain.

Minerals abound, but the only mines extensively worked are those of quicksilver at Almaden; of lead in Granada; and of iron in the Sierra de Aralar. Salt is procured at Cardona, in Catalonia, from the Albufera de Valencia, and from the sea water on the coast of Seville.

Manufactures were carried on to some extent in Spain in the 14th and 15th centuries, but they never flourished; and for a long series of years they have been in a very low condition, owing, besides the general causes which depress the country, to oppressive taxes, corporation privileges, government monopolies, the languishing emulation produced by the prohibition of foreign goods, and the indolence of the people, produced partly by the enervating influence of the climate. The chief manufacturing seats are Barcelona and other towns in Catalonia, and Alcoy and Valencia, in the adjoining province of that name; where silks, cottons, and woollens are made, but, except the first, all of inferior quality. Biscay is celebrated for its iron-works; and the N. provinces generally for their tanneries. The only other manufactures of any consequence are those of soap, paper, hats, linen, and pottery. Saltpetre, gunpowder, brass-cannon, tobacco, porcelain, tapestry, and mirrors, are made exclusively by government.

Wine, the great staple of Spain, is produced chiefly in the S. provinces, especially Andalusia, the principal seat of the trade; but vineyards are seen every where, except in the most elevated regions. The chief kinds are Xeres (Sherry), Malaga, Alicant, Malvasia, Tento, and Val de Penas. [WINE.]

The internal trade of Spain is inconsiderable, being impeded by the want of sufficient means of communication, to which great obstacles are presented by the unfavourable structure of the country. The want of navigable rivers, the distance of the central provinces from the coast, the difficulty of cutting roads and canals through high ridges of mountains and extensive plains, are indeed impediments which would require all the activity of a rich and well-governed nation to surmount. The roads are generally unfit for wheel-carriages, and merchandise is conveyed by *arrieros* or muleteers, who traverse the country in all directions, along beaten tracks, many of which are accessible only to them. About three-fourths of the inland traffic in corn is carried on in this manner; though recently wagons have begun to be introduced where practicable.

The narrow, shortsighted, anti-commercial policy of Spain, even from the first foundation of her American colonies, fettered and restricted her maritime trade, which, after a period of gradual decay, has been entirely annihilated by her loss of these colonies since the beginning of the present century. This restrictive system, though now tottering, is still maintained. And at present, in order to prop up the trifling manufactures of the country, most of the products of foreign industry are loaded with prohibitory duties, and the greater part of the external trade is conducted in a contraband manner through Portugal and Gibraltar, and on the coast of the Mediterranean, much to the demoralization of the people, and greatly to the detriment of the public revenue. Exports, chiefly wine, quicksilver, lead, wool, and raisins, with lemons and oranges, figs, olive-oil, and barilla, and occasionally some wheat. Imports, mostly sugar, coffee, tobacco, and other colonial productions from Cuba, Porto Rico, and the Philippines; cotton manufactures and cotton wool; linens, and hemp and flax; woollens; salt fish, hardware, glass, and earthenware; timber, rice, hides, butter, and cheese. The exports and imports are each estimated at from £4,000,000 to £4,500,000 a-year; but this is to be considered as only a rude approximation, there being no statistics of this miserable country on which we can repose confidence.

Between Spain and the United Kingdom there is a considerable intercourse. In 1840 the exports embraced 3,945,161 gallons wine; 223,268 gallons brandy; 2,157,823 lbs. quicksilver; 1,266,905 lbs. sheeps' wool; 166,505 cwts. raisins; 30,171 packages lemons and oranges; 1,305,384 gallons olive-oil; 36,585 cwts. barilla; 46,939 qrs. wheat; 1028 tons pig lead; besides small quantities of figs, liquorice juice, madder, sumach, raw silk, and kid and lamb skins. The regular imports of British produce and manufactures are, from the circumstances just alluded to, comparatively inconsiderable, amounting in 1840 only to £404,252, and in 1841 to £413,849, chiefly linen and woollen manufactures; but the contraband imports of cottons through Gibraltar and Portugal are considerable. Britain, besides, re-ships tobacco, spices, and other foreign merchandise, to Spain.

PORTS.—*Cadiz*, the principal commercial city and port of Spain, is situated in Andalusia, on the Atlantic, 60 miles N.W. from Gibraltar, in lat. 36° 32′ N., long. 6° 18′ W. Pop. 60,000. The city occupies the extremity of a tongue of land projecting from the Isle of Leon, making with the mainland a commodious bay. The port, formed by a projecting mole, is accessible only to small vessels; those of large burden anchoring 3-4ths of a mile from the shore. It is strongly fortified. Imports, linen, woollen, silk, and cotton fabrics; timber, tobacco, hides, salted fish; and sugar, cocoa, coffee, and other tropical produce; this city possessing the largest share of the colonial trade. Exports, principally wine, of which about 30,000 butts a-year, value near £1,000,000, are shipped chiefly to England, from Cadiz and the other ports around the bay; the other exports are quicksilver, provisions, brandy, salt, wool, and oil.

Barcelona lies in Catalonia, on the Mediterranean, in lat. 41° 22′ N., long. 2° 10′ E. Pop. 120,000. The town is the seat of manufactures of silk, leather, lace, wool, and other materials, all mostly in a declining state. The harbour is formed by a mole, but large vessels are obliged to anchor in an exposed situation outside. Imports, cotton, sugar, coffee, fish, hides, cocoa, spices, dye-woods, indigo, staves, cheese, bees-wax, horns, and specie. Exports, silks, ribands, laces, paper, hats, soap, firearms, and steel.

Alicant lies in Valencia, on the Mediterranean, in lat. 38° 21′ N., long. 0° 27′ W. Pop. 14,000. Its pier is accessible only for small craft; large vessels anchor outside. Exports, wine, brandy, almonds, barilla, olives and olive-oil, figs and other fruit, salt, wool, esparto-rush, silk, &c. Imports, colonial produce, timber, salted fish, linens, cottons, &c.

Malaga is situated in Granada, on the Mediterranean, 68 miles N.E. of Gibraltar, in lat. 36° 43′ N., and long. 4° 25′ W. Pop. 52,000. It possesses an excellent harbour. Exports, chiefly wines, raisins, almonds, grapes, figs, and lemons; with lead, olive-oil, brandy, anchovies, barilla, soap, &c. Imports, iron, salt-fish, butter and cheese, woollens, colonial produce, &c.

Bilbao, the ancient capital of Biscay, and chief port in the N. of Spain, lies in lat. 43° 12′ N., long. 2° 56′ W., on the Nervion, about 10 miles above its confluence with the sea at Portugalete, where, or at Olaviaga, 6 miles above, large vessels usually stop. Exports, principally iron and steel, wool, fruits, corn, and fish. Imports, chiefly colonial produce, cottons and woollens.

Palma, the capital and commercial emporium of the island of Majorca, lies in a bay on its S. side, in lat. 39° 34′ N., long. 2° 38′ E. It trades chiefly with Spain, France, and England. Exports, olive-oil, wine, brandy, oranges, and other fruits, capers, saffron, and mules. Imports, wheat, iron, hardware, provisions, and manufactured goods.

MEASURES, WEIGHTS, MONEY, FINANCES, &c.

MEASURES AND WEIGHTS.

The (Burgos) foot of 12 pulgados or 16 dedos, = 11·128 Imp. inches; the vara, or Castile ell, of 3 feet, or 4 palmos, = 33·38 Imp. inches; and 100 varas = 92·73 Imp. yards; the codo, for measuring timber and masts, is $\frac{2}{3}$ds of the vara, and consists of 8 palmos de Ribeira; the estada, or fathom, is 6 feet; the cuerda is 33 palmos de vara; the estadale is 12 feet. The Castilian or juridical league of 5000 varas = 4637 Imp. yards; the Spanish league of 8000 varas = 7418 Imp. yards; the marine league is $\frac{1}{20}$th of a degree.

The arançada of vineyard land = 5377¾ square varas = 3 Imp. roods, 33 poles nearly; the fanegada of corn land is in general about 6000 square varas, or 1 Imp. acre, 10¼ poles nearly; the yugada is 50 fanegadas; and the cahizada is a vague measure of land, on which a cahiz of corn may be sown.

The cantara, or greater arroba, wine measure, of 8 azumbres, or 32 quartillos, = 3·54 Imp. gallons; and 16 wine arrobas = 1 moyo = 56·64 Imp. gallons. The lesser arroba, oil measure, of 4 quartillos, or 100 quarterones, = 2·77 Imp. gallons. The botta = 30 wine arrobas = 38⅓ oil arrobas; the pipe = 27 wine arrobas = 34½ oil arrobas = 95½ Imp. gallons.

The fanega, corn measure, of 12 celemines, or 48 quartillos, = 1·55 Imp. bushel; and 100 fanegas = 19⅜ Imp. quarters; the cahiz of 12 fanegas = 18⅝ Imp. bushels.

The pound of 2 Castilian marks, 16 ounces, 128 drachms, or 9216 grains, = 7101 troy grains; the arroba of 25 lbs. = 25·36 lbs. avoirdupois; and the quintal of 4 arrobas, or 100 lbs., = 101·44 lbs. avoirdupois.

The apothecaries' weight is the same as the above; their ounce, however, is divided into 8 drachms, 24 scruples, 48 obolos, 144 caracteres, or 576 grains.

The gold and silver weight is the Castilian mark = 3550½ troy grains; in weighing gold it is divided into 50 castellanos, 400 tomines, or 4800 grains; and in weighing silver into 8 ounces, 64 ochavos, 128 adarmes, 384 tomines, or 4608 grains. The fineness of gold is expressed by dividing the mark or other unit of reference into 24 carats, each of 4 grains; the fineness of silver, by dividing it into 12 dineros, each of 24 grains.

The diamond ounce of 140 carats, or 560 Castilian grains, = 431½ troy grains nearly.

The preceding are the Castilian standards, which are the general or official standards of Spain. But the local variations are numerous; the chief are the following:—

Alicant.—100 varas = 83·22 Imp. yards. The tonelada, of 2 pipes, 80 arrobas, or 100 cantaros, = 254¼ Imp. gallons. The caffise, = 6¾ Imp. bushels. The arroba of 24 great pounds, or 36 small pounds, = 27·39 lbs. avoirdupois; the quintal consists of 4, and the carga of 10 arrobas.

Barcelona.—The cana of 2 varas = 62·25 Imp. inches. The carga, of 16 cortanes, or 12 arrobas, = 27½ Imp. gallons; and 4 cargas = 1 pipe: the oil carga is divided into 11 arrobas. The salma, of 4 quarteras, = 7·53 Imp. bushels: the carga of corn is 2½ quarteras. The arroba of 26 pounds, each of 12 ounces, = 21·37 lbs. avoirdupois; 4 arrobas = 1 quintal.

Bilbao.—The fanega, corn measure, = 1·65 Imp. bushel. The quintal of 100 lbs. = 108 lbs. avoirdupois; but the quintal *macho*, used in weighing iron, consists of 146 lbs., equal 157¾ lbs. avoird. In other respects same as Castile.

Malaga.—The cantara or arroba, of 8 azumbres, = 3·49 Imp. gallons; the pipe of wine contains 35 cantaras, but is reckoned at only 34, or 118⅔ Imp. gallons. The bota of oil contains 43 Castilian arrobas. The carga of raisins weighs 7 arrobas, or 177½ lbs. avoirdupois; a basket is half a carga. In other respects, same as Castile.

Valencia.—The vara = 36·16 Imp. inches; and 12 Valencia varas = 13 Castilian varas. The arroba, liquid measure, = 2·59 Imp. gallons; the carga of wine = 15 arrobas; the carga of oil = 12 arrobas. The cahiz, = 5·65 Imp. bushels. The arroba, weight, = 28¼ lbs. avoirdupois; 4 arrobas = 1 quintal, and 3 quintals = 1 carga.

MONEY.

Accounts are generally stated in reals of 34 maravedis *vellon* (billon), or, as by bankers, in reals of 16 quartos or 34 maravedis *plate* (silver). The real of vellon, the most common coin in Spain, consists of a base mixture of silver and copper, and is worth 2½d. sterling. The real of plate, or more properly of old plate (*plata antigua*), a nominal standard used only in accounts and exchanges, is estimated according to an old silver coinage, and is worth 4¾d. sterling. There are a variety of other reals, but when the term *real* is used alone, the real of vellon is always to be understood; and the simple term *plate* is to be understood as always denoting old plate.

In Alicant and all Valencia, accounts are kept in dollars of plate, or libras, divided into 20 sueldos, each of 12 dineros. In Barcelona and all Catalonia, the libra of account is similarly divided; but 5 dollars of plate are reckoned equal to 7 Catalonian libras.

The accounts of the public finances are stated in escudos vellon, each of 10 reals vellon. The escudo vellon = 2s. 1d. sterling.

Coins: In gold; the quadruple pistole, or doubloon of 8 escudos d'oro, = 320 reals vellon, or 16 hard dollars; the doubloon of 4 escudos = 160 reals vellon; the common doubloon or pistole = 80 reals vellon; the escudo d'oro = 40 reals vellon; the coronilla or gold dollar = 20 reals vellon:—In silver; the hard dollar = 20 reals vellon; the half-dollar or escudo vellon = 10 reals vellon; also the ¼ dollar, or Mexican peseta; the ⅕ dollar, or Provincial peseta; the ⅛ dollar, or real of Mexican plate; the $\frac{1}{10}$ dollar, or real of Provincial plate; the $\frac{1}{16}$ dollar, or half real of Mexican plate; and the $\frac{1}{20}$ dollar, or real vellon:—In copper; double quartos of 8 maravedis vellon; quartos; ochavos, or new maravedis of plate; maravedis of vellon.

Since 1786, the Castilian mark weight of gold, 21 carats fine, has been coined into 8½ doubloons of 8 escudos, 17 doubloons of 4 escudos, 34 common doubloons, or 68 escudos. The same weight of silver, since 1772, has been coined into 8½ hard dollars, 17 half-dollars, 34 pesetas, or 68 reals of Mexican plate,—the fineness or standard of the dollars and half-dollars being 10¾ dineros, and of the pesetas and reals of Mexican plate, 9¾ dineros: the real vellon, and the Provincial peseta and real, are composed of base silver or billon. The remedy of the mint for the gold coins, is 24 grains per mark in the weight, and $\frac{1}{16}$th of a carat in the fineness; for the silver dollar and half-dollar, 24 grains per mark in the weight, and $\frac{1}{32}$th of a dinero in the fineness.

Hence the weight of the doubloon of 8 escudos, or quadruple pistole, is 417·70 troy grains; its contents in pure gold, 365·49 troy grains; and its value, when of full weight, £3, 4s. 8¼d.: the weight of the hard dollar, 417·70 troy grains; its contents in pure silver, 374·19 troy grains; and its full value, 4s. 2½d. But the more general values of these coins, as deduced from assays, are £3, 4s. 1d., and 4s. 2d. respectively.

The ducat, pistole, and dollar of plate (i. e. *old plate*), are monies of exchange merely, not coins. The ducat of plate = 11 reals, 1 maravedi plate, or 375 maravedis plate: the pistole of plate = 4 dollars of plate: the dollar of plate, or piastre, = 8 reals plate = 15 reals, 2 maravedis vellon, or 512 maravedis vellon. The peso duro or hard dollar = 20 reals vellon = 10⅝ reals plate: hence 32 reals vellon = 17 reals plate: 64 hard dollars = 85 dollars of plate; and 4 maravedis vellon = 1 quarto of plate.

The Exchange with London is, throughout Spain, effected in piastres or dollars of plate, the par being 37¾ pence per dollar. Bills from London upon Madrid, Cadiz, Bilbao, Barcelona, or Seville, are generally drawn at 3 months' date. The custom as to days of grace varies in different places: in Madrid none are allowed.

Banking, as understood in Britain, is unknown in Spain, and in ordinary transactions there are no substitutes for cash. There is, however, an extensive circulation of inland bills of exchange, through the medium of the higher class of merchants, who all call themselves bankers, and who have agents and connexions in the different towns to facilitate their operations.

FINANCES.

The finances of Spain are in such confusion that we are unable to furnish any precise account of their present condition. In the budget for 1839, the revenue was stated at reals 715,096,838 = £7,448,925; but it may be doubted if this sum was realised; and, at all events, it was greatly exceeded by the expenditure.

The debt in 1840, according to the report of a committee of the English creditors, was as follows:—Active foreign debt, £51,061,958; active internal debt, £6,502,865; together, £57,564,823,

Equal in reals vellon to.........r.	5,528,143,008
Internal debt, not bearing interest	9,995,489,321
Foreign debt, do.	2,434,344,000
Total..r.	17,957,976,329

or £187,062,253. The foreign debt was contracted in Britain, France, and Holland.

TREATIES.

Numerous conventions exist between the United Kingdom and Spain, for the particulars of which our limits will allow us only to refer to Mr Hertslet's Collection of Treaties.

SPECIE, metallic currency.

SPECULATION is, according to political economists, every transaction in which an individual buys in order to sell again; but among commercial men, the term is more loosely applied to incurring extensive hazards in the hope of corresponding emolument; in short, to whatever is foreign to the proper business of the individual, or beyond the control of common rules. [PRICE.]

SPELTER, a common name for ZINC.

SPERMACETI (Fr. *Blanc de baleine*. Ger. *Wallrath*. It. *Bianco di balena*), the product of the *Physeter macrocephalus*, a species of whale found chiefly in the South Seas. This whale is characterized by an enormous head, great part of which is occupied by a triangular cavity filled with a white fluid oily substance, which, after its death, congeals into an unctuous mass, from which a considerable quantity of oil may be obtained by expression. The residuum is a concrete fatty substance called spermaceti, which is generally imported in a crude state; after being purified, it is cast into blocks or cakes. These are of a white colour, have a peculiar lustre, are transparent, brittle, smooth, but not greasy; smell peculiar, but weak. Sp. gr. ·948. Spermaceti burns with a brilliant flame, without smell, and is used in the manufacture of candles; also for medical purposes.

Spermaceti oil is more pure, and burns more perfectly and brilliantly than common whale oil; and it is accordingly much used for the finer kinds of lamps.

SPIGELIA, OR CAROLINA PINK, a perennial, herbaceous, medicinal plant (*S. Marylandica*), indigenous in the S. states of the N. American Union. The part chiefly valued is the root, which, in its newly dried state, is celebrated as anthelminthic. It is purchased by the Americans from the Creek and Cherokee Indians, but, losing power by keeping, little is carried to Europe.

SPINEL, an ornamental stone which occurs crystallized either in regular octahedrons, or in macles presenting different forms. It is of various shades of red, violet, or yellow, more rarely black. Sp. gr. 3·5. By lapidaries, the scarlet-coloured is termed *spinel ruby*; the rose-red, *balas ruby*; the yellow or orange red, the *rubicelle*; and the violet-coloured, *almandine ruby*. The first is the most valuable. Spinel is not so hard as the oriental ruby, and is readily distinguished, both by its colour and crystallization. It is principally found in Ceylon and the Malay peninsula. The pale, blue, and pearl-gray varieties are found in Sweden.

SPIRITS, distilled liquors, modifications of ALCOHOL, which differ from each other in taste and flavour, and some of them in colour, though this last difference is adventitious, as, when first prepared, they are all limpid and colourless, and acquire the peculiar tint by which they are ultimately distinguished from the casks in which they are kept, or from some colouring substance added during their preparation. They derive their taste and flavour from particular essential oils with which they are impregnated, and which differ according to the substances that furnish each spirit or are employed in the manufacture. Commercially, they are classed as Foreign and Colonial, and British, and for fiscal purposes, the former are subjected to the customs, the latter to the excise department of the public revenue.

FOREIGN AND COLONIAL SPIRITS consist of *brandy*, procured from wine; *rum*, from the fermented juice of the sugar-cane; and *geneva*, made chiefly from rye; a particular account of which will be found under these respective heads. Other spirituous liquors are prepared abroad; but, with the exception perhaps of Indian *arrack*, usually manufactured from rice, they are unimportant and little known beyond the countries of production.

BRITISH SPIRITS are made principally from barley, employed either in the state of grain or malt, according to the kind desired. In Scotland and Ireland, where spirits are the national beverage, the liquor is preferred in its pure and simple state [WHISKY], and it is supplied to the retailers directly from the distilleries, which are very numerous. In England, on the other hand, beer is the general drink of the people; while spirits, the use of which is confined chiefly to large towns, are not considered palatable until compounded with and disguised by the addition of other ingredients [GIN], and hence the rectifier has been constituted the individual who furnishes the spirits for retail,—leaving distillation a kind of monopoly in the hands of a comparatively small number of persons. Repeated attempts have been made, by the imposition of high duties and otherwise, to diminish the consumption of spirits; but in no instance with success. Whenever the tax is carried beyond certain moderate limits, it gives rise to illicit distillation; and without in any degree lessening the evils of drunkenness, produces other kinds of demoralization, bringing the law into contempt, and enabling those who despise its enactments to undersell the fair trader.

The Spirit Duties are the most important of all under charge of the excise; both with respect to the amount of revenue received, and to the extent of official employment which they impose.

In England, spirits were first subjected to the excise in 1660. After various fluctuations, the duty stood in 1790 (reckoned in Imperial) at 3s. 4½d. per gallon; at which it continued until 1819, when it was brought up to the maximum rate of 12s. 7d. per gallon. This high duty remained until 1826, when, in consequence of the satisfactory result of a great diminution in the duty in Scotland and Ireland in 1823, it was reduced to 7s. a-gallon. The effect of this alteration was an increase in the quantity brought to charge from 3,655,232 gallons in 1825, to 7,007,204 gallons in 1826. In 1830, the rate was raised to 7s. 6d. a-gallon.

In Scotland and Ireland, the duties, after various changes, were reduced, the former from 6s. 2d., the latter from 5s. 7½d. to 2s. 4½d. per gallon; which, however, was raised, in 1826, to 2s. 10d., and, in 1830, to 3s. 4d. per gallon. In 1834, the Irish duty was lowered to 2s. 4d.; but it was again made equal to the Scottish in 1842 (5 Vict. c. 15).

The act 3 Vict. c. 17, added 4d. per gallon to the duties after May 15, 1840; thus making the rates 7s. 10d. in England, and 3s. 8d. in Scotland and Ireland; which duties are reckoned on spirits of hydrometer proof. On the malt used by distillers, a drawback is allowed of 8d. per gall. The consumption of spirits in the United Kingdom, 26,729,004 gallons in 1831, increased in 1836 to 31,348,334 gallons; but in the next five years, it fell off to 24,124,921 gallons, the quantity shown below for 1841. This decrease is mainly attributed to the progress of temperance associations in Ireland. The amounts stated, however, are not believed to show the whole consumption, as the duties are still sufficiently high to afford some encouragement to smuggling.

Total Number of Proof Gallons of Spirits that paid Duty in 1831 and 1841.

	1831.				1841.			
	Rum.	Brandy, &c.	British Spirits.	Total.	Rum.	Brandy, &c.	British Spirits.	Total.
England, *galls.*	3,479,911	1,209,796	7,434,047	12,123,754	2,217,073	1,127,849	8,185,499	11,530,421
Scotland, . . *do.*	125,702	38,994	5,700,689	5,865,385	48,523	40,291	5,989,905	6,078,719
Ireland, ... *do.*	18,984	10,209	8,710,672	8,739,865	12,374	17,964	6,485,443	6,515,781
United Kingdom, ... *do.*	3,624,597	1,258,999	21,845,408	26,729,004	2,277,970	1,186,104	20,660,847	24,124,921
Net Duty, . . £	1,629,881	1,415,061	5,189,661	8,234,603	1,063,087	1,354,079	5,168,862	7,586,028

The number of gallons distilled in 1841 were as follows:—In England, 5,919,207; Scotland, 8,504,333; Ireland, 6,359,124; total, 20,782,664. Imported into England—from Scotland, 1,894,657 gallons, from Ireland, 354,898; into Ireland from Scotland, 569,779 gallons; into Scotland from Ireland, 98,253 gallons.

SPONGE (Fr. *Eponge.* Ger. *Schwamm.* It. *Spugna.* Arab. *Isfenj*), a light, porous, elastic, brownish yellow substance, procured by divers, chiefly in the Greek Archipelago and Red Sea, and of an inferior description in the West Indies. It is now ascertained to be a species of zoophyte. It grows into irregular tubes of a woolly consistence, and generally adheres by a broad base to rocks submersed in the ocean. When first taken, it has a strong fishy smell, and requires to be carefully washed from a gelatinous slime which covers its surface, in order to prevent its growing putrid. Sponges are prepared for use by washing them anew and beating them free of all stony matter, and they are even bleached to deprive them of colour. Their price varies exceedingly, according to the fineness of their texture. They are used for domestic purposes, in the arts, and in surgery.

SPRAT, a small fish (*Clupea sprattus*), resembling a young herring, found in large shoals on the Norfolk, Suffolk, Kent, and Essex coasts. It is also taken in the Forth, near Edinburgh, where it is called the *garvie herring*, and on the eastern coast of Ireland. Sprats are in season from November to March, when an abundant supply is always to be obtained at Billingsgate. Within the last few years they have been extensively used as a manure. The fishing for this purpose, called the *stow boat fishery*, is chiefly prosecuted on the Kentish coast.

SQUILL (Fr. *Scille.* Ger. *Meerzwiebel.* It. *Scilla*, *Cipolla marina.* Sp.

Cebola albarrana), or sea-onion, is a perennial bulbous-rooted plant (*Scilla maritima*), found on the shores of Spain, Portugal, North of Africa, and the Levant. The bulbs are pear-shaped, and vary in size from that of the fist to the compass of a child's head. They are the only part used, and should be chosen plump, fresh, sound, full of a clammy juice, nauseous, acrid, and bitter, and causing inflammation when rubbed on the skin. In the shops, squill is commonly met with in the form of the dried shreds of the root. It is used medicinally, chiefly as an expectorant.

STADE TOLL. [HAMBURG.]

STAMPS, impressions made upon paper or parchment by government for the purposes of revenue. They always denote the tax levied, and sometimes the nature of the instrument stamped. Stamp-duties were first imposed in Holland, 1624; and they not long afterwards became general in Europe; there being, as Adam Smith remarks, "no art which one government sooner learns of another, than that of draining money from the pockets of the people." They were introduced into England in a temporary form in 1671; and having been revised in 1693 (5 Wm. & M. c. 21), were in time extended, so that besides crown grants, diplomas, probates of wills, and law and other formal proceedings, every instrument recording a transaction between two individuals was subjected to a stamp-duty before it could be used in a court of justice. Newspapers and legacies [SUCCESSION DUTIES] were also brought under the same system. Stamps were likewise adopted as a convenient method of imposing a duty upon particular classes of persons, as physicians, barristers, and attorneys, who are taxed before they can begin practice, under the form of an admission-stamp; and notaries, solicitors, bankers, pawnbrokers, and appraisers, who are not qualified to exercise their callings without a yearly license. The stamp acts, voluminous in number and extent, were consolidated in 1815 by 55 Geo. III. c. 184, a schedule annexed to which exhibits the whole duties exigible in Britain. They have been since mitigated, particularly by 5 Geo. IV. c. 41, which exempts law proceedings from stamps. In 1842, the stamp-duties in Ireland, formerly lower than those in the sister island, were raised to the same level, until October 10, 1845, by 5 & 6 Vict. c. 82. And the following table exhibits those chiefly of importance in commerce:—

TABLE OF PRINCIPAL STAMP DUTIES.

BILLS AND PROMISSORY NOTES.

Inland.

	Not exceeding two months after date, or sixty days after sight.		Longer Period.	
	s.	d.	s.	d.
For £2 and not above £5, 5s.	1	0	1	6
Ab. 5, 5s. .. 20....	1	6	2	0
20 .. 30....	2	0	2	6
30 .. 50....	2	6	3	6
50 .. 100....	3	6	4	6
100 .. 200....	4	6	5	0
200 .. 300....	5	0	6	0
300 .. 500....	6	0	8	6
500 .. 1000....	8	6	12	6
1000 .. 2000....	12	6	15	0
2000 .. 3000....	15	0	25	0
3000........................	25	0	30	0

FOREIGN.

Drawn singly same as inland bills.

	s.	d.
When in *sets*, then for every bill of each set not exceeding £100..........	1	6
Above £100 and not above £200......	3	0
200 .. 500......	4	0
500 .. 1000......	5	0
1000 .. 2000......	7	6
2000 .. 3000......	10	0
3000..........................	15	0

The duty on a promissory note for the payment of any sum by instalments, or of several sums at different times, is the same as that on a promissory note payable within a period not exceeding two months after date, for a sum equal to the whole amount to be paid.

N. B.—Promissory notes for £100 or under are not to be drawn *payable to the bearer on demand*, except bankers' re-issuable notes, which require a different stamp.

BILLS OF LADING..........................6d.

DEBENTURES..............................5s.

INSURANCE POLICIES.

LIFE.

	L.	s.	d.
When sum not above £50............	0	2	6
Above £50 and not above £100......	0	5	0
.. 100 and under £500..........	1	0	0
When 500 .. 1000..........	2	0	0
.. 1000 .. 3000..........	3	0	0
.. 3000 .. 5000..........	4	0	0
.. 5000 and upwards.............	5	0	0

FIRE.

Duty on each policy................£0 1 0

Besides 3s. per cent. per annum on every insurance made or renewed.

Exemptions.—Public hospitals; also agricultural produce, farming stock, and implements of husbandry, provided the insurance shall be effected by a separate and distinct policy.

SEA.—*Coasting Voyage.*

	s.	d.
Premium not above 20s. per cent.		
If sum not above £100.................	1	3
Every £100, and also for any fractional part of £100.........................	1	3
Premium above 20s. per cent.		
If sum not above £100.................	2	6
Every £100, and part of £100.........	2	6

Foreign Voyage.

	s.	d.
Premium not above 15s. per cent.		
If sum not above £100.................	1	3
Every £100, and part of £100.........	1	3
Premium above 15s. and not above 30s. per cent.		
If sum not above £100.................	2	6
Every £100, and part of £100.........	2	6
Premium above 30s. per cent.		
If sum not above £100.................	5	0
Every £100, and part of £100.........	5	0

For any certain term not exceeding three months.

	s.	d.
Every £100, and part of £100	2	6
Exceeding three months	5	0

If the separate interests of two or more distinct persons shall be insured by one policy, then the said duty of 1s. 3d., 2s. 6d., or 5s., as the case may require, shall be charged thereon, in respect of each and every fractional part of £100, as well as in respect of every full sum of £100, which shall be thereby insured upon any separate and distinct interest.

Protests.

	s.	d.
On bill or note for any sum less than £20	2	0
£20 and less than £100	3	0
100 .. 500	5	0
500 or upwards	10	0
Protest of any other kind	5	0

And for every sheet upon which the same shall be written after the first, a further duty of 5s.

Receipts

	s.	d.
For money amounting to £5 & under £10	0	3
10 .. 20	0	6
20 .. 50	1	0
50 .. 100	1	6
100 .. 200	2	6
200 .. 300	4	0
300 .. 500	5	0
500 .. 1000	7	6
1000 or upwards	10	0
For any sum acknowledged to be in full of all demands	10	0

N.B.—By 9th Geo. IV. c. 27, any person who purchases receipt-stamps to the amount of £1 at one and the same time, from any duly appointed distributor or sub-distributor, is entitled to a discount of 7½ per cent. on every complete sum of £1 of purchase money.

The stamp laws, in reference to mercantile writings, are explained under Bills of Exchange, Policy, Receipt, and other heads. Farther information will be found in *Chitty's Practical Treatise on the Stamp-Laws.*

STAPLE, originally a public market whither traders were obliged to carry their goods for sale; but now applied to the chief productions of a country.

STARCH (Fr. *Amidon*. Ger. *Amidam*), a substance found in a variety of vegetables, but procured generally from wheat flour or potatoes. The greater part of the common or wheat starch employed in this country is made in or near London. Potato starch is made chiefly in districts where potatoes are cheap and abundant, more particularly in Scotland. The process for obtaining it, in both cases, consists in diffusing the powdered or bruised grain or seed, or the rasped root or stem, in cold water, which becomes white and turbid; the grosser parts may be separated by a strainer, and the milky liquor that passes deposits the starch, which is to be washed in cold water and dried in a gentle heat. 100 lbs. of wheat produce about 33 lbs. starch; and 100 parts of skinned potato from 15 to 17 parts of starch. The best kind is white, soft, and friable, and easily reduced to powder. Sp. gr. about 1·5. It is insoluble in cold water and alcohol, but readily affords a gelatinous solution in warm water, which is largely employed for stiffening articles of wearing apparel, and for dressing some descriptions of goods after weaving. It is also much employed by the calico-printer. Potato starch is said to be much more susceptible of moisture than wheat starch, and goods which are stiffened with it are apt to yield in damp weather, and to become mouldy if laid by. A duty of 3½d. per lb. was formerly levied in Britain on starch, but it was abolished in 1834, at which time the excise accounts showed that the annual consumpt was about 8,700,000 lbs.

STEAM-ENGINE, a piece of mechanism by which the force arising from the properties of elasticity and of instantaneous condensation, possessed by steam, is either employed to produce a continuous rotatory motion (with a fly-wheel which constitutes a reservoir of power) for the purpose of driving machinery, or for any other use that power may be put to. In common with most other important applications of physical principles, no individual can lay claim to its invention; but its germ is to be found in the steam-pumps of the Marquis of Worcester (1663) and Captain Savery (1698); and in a more advanced state in the "atmospheric engine" of Newcomen (1705), also employed for pumping water only, but which, by the genius of James Watt (*b.* 1736, *d.* 1819), was eventually converted into the modern steam-engine. [Machinery.]

STEAM NAVIGATION was attempted by various individuals in the course of the 18th century; but the experiments which tended more than any other to develop this application of steam were the joint labour of three Scotsmen—Patrick Miller of Dalswinton, Dumfriesshire, James Taylor, his son's tutor, and William Symington, mining-engineer,—Miller preparing the proper vessel and propelling apparatus, Taylor recommending the steam-engine as the working-agent, and Symington effecting the modifications necessary in its structure. This took place between 1786 and 1789; and in 1802 a steam-tug, made by Symington, with a single paddle-wheel in the stern, was placed on the Forth and Clyde Canal; but the project was abandoned through fear that the undulation produced by it would prove injurious to the banks. Symington's apparatus, though then neglected in this country, had been seen and examined by many, and especially by Robert Fulton, an American, then studying painting under West; and who, with less merit as an inventor than Symington, but with more ample resources and greater energy, succeeded, in conjunction with Chancellor Livingstone, in introducing steam navigation into the United States in 1807, when the Clermont of 160 tons was launched at New York. Four years afterwards, it was successfully established in this country by Henry Bell, an enterprising house-carpenter of Glasgow, who in 1811 started the Comet, of 25 tons burden and 3 horse power, to ply to a bath hotel which he had set up at Helensburgh.

The progress of steam navigation was afterwards rapid, particularly in the United States, owing to the number and extent of its rivers, for which alone steamers were at first considered to be adapted. As improvement advanced, however, and confidence increased, they came gradually into use as marine vessels, for which purpose they were first fitted in 1818 by David Napier, engineer, Glasgow, who, from that year until 1830, effected more for the improvement of steam navigation than any other man; and whose cousin, Robert Napier, is also honourably distinguished in the same walk. Mr David Napier established regular steam communication between Britain and France and Ireland; by degrees almost all parts of the shores of Europe were traversed in like manner; and in 1838 a line of steamers, of gigantic size, commenced running between England and the United States. Steam-vessels have since been adopted for many other parts of the ocean; and their increasing use in every civilized country has produced, and is daily producing, results which it is impossible fully to estimate.

We refrain from entering into any details respecting the formation of steam-vessels; but we may notice that of late years not a few have been built of iron, from its superior buoyancy to wood; and that a magnificent one called the Mammoth or Great Britain, is about to be launched at Bristol, on which 1500 tons of iron have been expended. Her dimensions are given as follows:—Length of keel, 282 feet; length over all, 324 feet; breadth, 51 feet; depth of hold, 32 feet; power of engines, 1000 horses; burden, 3200 tons; displacement, 3000 tons; and load draught, only 16 feet. The hull is divided into five distinct water-tight compartments. Another important feature in the Great Britain is the adoption of the screw propeller, which will save the cumbrous appendages of paddle-wheels and boxes. The screw propeller, as originally tested by the Archimedes steamer, was placed in the *dead wood* under its counter, and between the keel and stern post; and it consisted of a helix, making but one revolution about a horizontal axle passing longitudinally through the ship, and put in motion by a steam-engine. But this plan is said to be considerably modified and improved in the Great Britain. Should this bold experiment prove successful, it will probably lead to an entire revolution in the system of steam navigation.

The number and tonnage of British steam-vessels cannot be very accurately stated, because no correct information can be obtained respecting unregistered vessels, which ply only within the limits of their respective ports; and which appear to be very numerous in the Mersey, Humber, Thames, Clyde, and other rivers. According to an approximate statement prepared in 1839, the merchant-steamers at the end of 1838 were, for the British islands, 766 in number, having a burden (including 62,690 tons for engine-room, &c.), of 142,168 tons; and adding the aggregate colonial tonnage in 1837, 15,664 tons, there is given a total for the empire of 157,840 tons, the amount of horse-power being 63,250. Of the 766 British steamers, 484 were river steamers and small coasters, and 282 large coasters and sea-going ships. In 1838, the United States possessed an aggregate steam-tonnage of 155,473 tons, and 57,019 horse-power.

On December 31, 1841, the registered mercantile steam-marine of the British islands amounted to 95,795 tons; but adding to this the engine-room tonnage, and allowing for colonial and unregistered vessels, the aggregate must have amounted to fully 200,060 tons, exclusive of steam mail-packets and vessels of war, of which a large and yearly increasing fleet is now maintained.

A large steam-navy is now also possessed by France; but very few war-steamers have as yet been built in the United States. The number of steam-vessels possessed by other countries is comparatively inconsiderable.

STEARIN, the harder portion of animal fats; olein or elain being the softer one. Stearin yields an acid, called stearic acid, and having the form of brilliant white scaly crystals, which is now largely employed in soap and candle making.

STEATITE, a species of soap-stone found in Scotland, Anglesea, and many other parts. The white varieties, or those which become so by calcination, are used in the manufacture of porcelain; others are employed for fulling.

STEEL, a compound of iron and a minute quantity of carbon. [Iron.]

STEELYARD, a weighing-machine consisting of a lever of unequal arms.

STERLING, a term which has long been applied to the standard money of England. The derivations of this word, offered by various authors, are numerous perhaps beyond those of any other in our language. See *Ruding's Annals of the Coinage of Britain*, vol. i. p. 21-24.

STOCKS. [Funds.]

STONE, the name of a weight in different parts of Europe. The standard British stone = 14 lbs. avoirdupois. Formerly the stone of butcher-meat or fish in London (still partially used) was only 8 lbs. avoirdupois; while in Scotland, the common commercial stone was 16 lbs. Scots troy = 17·39 lbs. avoirdupois.

STONE-TRADE. The principal kinds of stone used in building are the limestones or calcareous rocks of the geologist, commonly called freestone; of these it would be useless to describe or enumerate more than a few. In England, *Portland stone*, so called from its principal quarries being in Portland Island, Dorsetshire, holds the first rank, and is that used in London for stone building, and for the ornamental parts of edifices. St Paul's, Westminster and Blackfriars Bridges, Newgate, and indeed most of the public buildings of the metropolis, are examples of its use. About 30,000 tons of Portland stone are said to be annually exported to London; the best blocks bringing from 18s. to 22s. per ton; and the inferior from 6s. to 8s. *Bath stone*, used in that city and neighbourhood, is softer and far less durable than the preceding. *Purbeck stone*, from Dorsetshire, coarser and harder than the preceding, is valued for steps, paving, door-sills, and copings. *Yorkshire stone* resembles the last. *Rag stone*, obtained from quarries on the banks of the Thames and Medway, is used for paving. The quarries of Gateshead Fell furnish the celebrated "Newcastle grindstones." There are various other kinds; as, *Oxford stone* and *Ketton stone*, distinguished according to their principal localities. But, upon the whole, the quarries in England are not of any great extent or value; and bricks are in consequence the chief building material.

In Scotland, however, where stone is used almost to the entire exclusion of bricks, the quarries are numerous and some very excellent, particularly Craigleith, near Edinburgh, and Cullalo in Fife. Superior granite is also found in various places, particularly near Aberdeen, from whence about 12,000 tons are annually shipped to London for works where strength and durability are required; and in Kirkcudbrightshire, from whence that employed in the construction of the Liverpool Docks was partly derived.

In Ireland, there are quarries of granite in the county of Dublin, and near Newry, in the county of Down; red sandstone in Tipperary and the county of Cork; and limestone, of a rich kind, in Queen's County, and in the counties of Dublin, Meath, and Cork. Other varieties of stone are found in different parts.

STOPPAGE IN TRANSITU, is the right which the seller of goods has to stop them *in their passage* to the buyer, if the buyer has become bankrupt or insolvent before they come into his custody, and is unable to pay their price. It has been the subject of much debate whether this right partakes of the nature of lien, or is an exercise of property on the part of the seller; but no practical rule has arisen out of these discussions, and the right is practised as an arbitrary exercise of expediency. It remains then simply to state the circumstances in which, according to the tenor of the decisions, it may be exercised. "All persons standing in the relation of vendor and vendee, or consigner and consignee, on a sale or consignment of goods on credit, may exercise the right of stoppage in transitu; and there are cases in which the law recognises this right, though the contract under which the goods have been consigned may not be literally a contract of sale. Hence, where a factor or agent, by order of his principal, purchases goods for him, and consigns them to him on credit, with an additional charge on account of commission, making himself liable to the original vendor in the first instance, and no privity exists between such vendor and the principal, the factor or agent is so far considered as the vendor of the goods to the principal, as to be entitled to stop them in transitu, upon the insolvency or bankruptcy of the latter, though he may not perhaps be considered as standing in that relation for all purposes" (*Cross*, 363-4). There is no analogy to a general lien in the right to stop in transitu, and therefore it can only be exercised for the price of the individual commodity stopped, and cannot be had recourse to for a general balance. On the other hand, if the balance of accounts between the parties, taking the price of the goods into consideration, be not against the buyer—in other words, if it was so much in his favour that the delivery of the goods will not turn it against him—there is no right to stop.

The most difficult questions occur as to the position in which commodities may be stopped. While they are at the order of the vendor by being in the hands of his servants, there can be no doubt that the right exists, or, more properly speaking, the right of keeping possession exists; on the other hand, when they have come under the order of the purchaser, by being in the hands of himself or his servants, there is as little doubt that the right ceases. The time for its exercise is while the property is in the hands of a middle-man, who holds for the benefit of whichever party has a just legal claim. A shipowner, carrier, packer, wharfinger, is such middle-man. The property is liable to stoppage though the middle-man has been appointed by the consignee. But the consignee's connexion with the middle-man may be such that the latter's repositories are virtually those of the consignee, having been hired by him; so if the purchaser use the wharfinger's or packer's warehouse as a place for the custody and disposal of his goods, it is virtually his own warehouse, and the right to stop ceases on their arrival there. If the consignee keep the goods in the seller's warehouse, paying warehouse rent, the seller has ceased to have any control over them. There may be a commencement of delivery not so far completed as to give the purchaser sufficient possession to bar stoppage. Thus, where a bargeman, intrusted with a cargo of iron, landed part of it at the vendee's wharf, but hearing that the consignee had become bankrupt, immediately re-loaded it, it was found that he legally used the right of stoppage in favour of the seller (Crawshay and Others *v.* Eades, 1 *B. & C.*, 181). When there is a right to stop in transitu, it is sufficiently exercised by notice being given to the middleman in whose hands the property is; if he should disregard the notice and deliver the goods, the delivery will not be valid. (*Cross on Lien and Stoppage in Transitu*, 361, *et seq.*)

STORAGE, warehouse rent.

STORAX, a balsam obtained from the *Styrax officinalis*, a tree found in the Levant, Italy, and France. It was formerly used in medicine.

STORES, the supplies of food, liquor, and other articles provided for the subsistence and accommodation of a ship's crew and passengers. [CUSTOMS REGULATIONS. WAREHOUSING SYSTEM.]

STRANDING OF A VESSEL. In recovery of losses from underwriters, it is often a question of material consequence, whether the vessel was or was not "stranded," according to the legal meaning of the term. [POLICY.] To constitute stranding, it is not sufficient that the vessel has struck, if she has been speedily got off, however much she may be injured. In Wells *v.* Hopwood (3 *B. & Adol.* 20), a vessel arrived in a tide harbour, and proceeded to discharge her cargo at a quay on the side, which could be done at high-water only, and could not be completed in one tide. At the first low ebb the vessel grounded on the mud, but, on a subsequent ebb, the rope by which her head was moored to the opposite side of the harbour stretched, and the wind blowing from the east at the same time, she did not ground entirely, as it was intended she should, in the mud, but her forepart got on a bank of stones and rubbish. The vessel was strained, and her seams opened, closing again at high tide; and though she was in the end uninjured, the cargo was damaged, and it was held a stranding. In this case Lord Tenterden observed, "That where a vessel takes the ground, in the ordinary and usual course of navigation and management, in a tide river or harbour, upon the ebbing of the tide, or from natural deficiency of water, so that she may float again upon the flow of the tide or increase of water, such an event is not to be considered a *stranding* within the sense of the memorandum. But where the ground is taken under any extraordinary circumstances of time or place, by reason of some unusual or accidental occurrence, such an event shall be considered a stranding within the meaning of the memorandum." In Kingsford *v.* Marshall (8 *Bingh.* 458), the ground was taken where the master intended, but the vessel in taking it struck against some hard substance which pierced the bottom. The cargo was damaged, but this was held not to constitute a stranding. "If the ship," says Mr Marshall, "be forced aground, and remain for any time stationary, whether it be on piles, on the muddy bank of a river, or on rocks on the seashore, provided there be a settlement of the ship, so that the voyage is actually interrupted, that is a stranding, without reference to the degree of damage she sustains" (232). (*Park on Insurance*, 177, &c. *Marshall on Insurance*, 231-234.) [INSURANCE. POLICY.]

STRAW-PLAT consists generally of the stalks of wheat, but sometimes also of those of rice, rye, or darnel grass, which are platted in order to be made up into hats or bonnets. This branch of industry, which is every where of a domestic kind, appears to have originated in Italy, and to have been introduced about the middle of last century into England. The large size of the wheat-straw, however, in this country operated against the manufacture until within the last 50 years, when, owing to the adoption of splints or slips of straw in lieu of whole straws, and the interruption of the Italian trade by war, it rose into importance in Bedfordshire, Hertfordshire, and Buckinghamshire; the principal markets being Luton, Dunstable, and St Albans. Various kinds of plat are distinguished in trade, but they are continually changing with the caprice of fashion.

The straw used in Tuscany, the great straw-plat district of Italy, is said to be that of *Triticum turgidum*, a variety of bearded wheat, cultivated solely for the straw; being sown close, and consequently produced thin and short: the upper joint of the stalk is that chiefly used. The beauty of the Tuscan plat is also greatly increased by the mode of joining it so as to form, by the combination of several narrow strips, an extended sheet of platted work. British plat, again, is commonly joined by making the several rows of plat overwrap each other a little, and then joining the two overwrapping pieces with a needle and thread; and the articles made of split-straw are besides inferior to those of whole-straw of equal fineness, in pliability and durability. The Tuscan manufacture is chiefly followed in the neighbourhood of Florence, Pisa, Sienna, and the Val d'Arno.

STUCCO, a compound of PARIS PLASTER and LIME, used in forming cornices.

STURGEON, a large cartilaginous fish (*Sturio*), of which there are several varieties. It is caught occasionally on various parts of our coast, most frequently in the estuaries, or but a short distance up rivers; and is frequently brought to the London market from various localities. In the N. of Europe, the Caspian, and other places, the sturgeon fisheries are of great importance. Caviar is made of the roe of the female; isinglass is obtained from the dense membrane forming the air-bladder; and the flesh, besides being preserved by salting and pickling, is in request for the table while fresh.

SUCCADES, sweetmeats or preserves in sugar.

SUCCESSION DUTIES. The *vicesima hereditatum*, the twentieth penny of inheritances, imposed by Augustus on the Romans, is the earliest example we have of a tax upon the transference of property from the dead to the living. Many of the casualties of the feudal law were of the same nature; but the Dutch appear to have been the first to adopt succession taxes in their modern form. In this country, where they belong to the stamp department of the revenue, they are levied solely upon moveable property, which is effected partly by a stamp-duty proportioned to the amount of the deceased's effects, but graduated differently for testate and intestate successions,—and partly by per centage duties on legacies or residues. Succession duties are objectionable in principle [TAX], being in the general case a tax on capital; but, on the other hand, they possess the advantage of being easily collected.

SUGAR (Du. *Suiker*. Fr. *Sucre*. Ger. *Zucker*. It. *Zucchero*. Por. *Açucar*. Rus. *Sachar*. Sp. *Azucar*. Arab. *Sukkur*. Malay, *Soola*) exists in all vegetables having a sweet taste, but is obtained chiefly from the sugar-cane (*Saccharum officinarum*), which contains it in greater quantity than any other plant. The sugar-cane thrives from the equator to the 32d degree of latitude. It is one of the largest of the grasses, growing from 8 to 12 feet in height, and acquiring a diameter of one or two inches; the sugar being contained in the loose, cellular, juicy pith with which the stalk is filled. In the British West Indies, from August to November is generally considered the best time for planting the cane. When ripe, commonly about March or April, it is cut off at the root, stripped of leaves and ends, and then passed twice through a mill so as to express all the juice. To prevent fermentation, a portion of lime (about 1 to 1600) is mixed with the juice, which is then evaporated by a moderate and cautious ebullition. When the syrup is sufficiently concentrated, it is drawn off into shallow wooden coolers, where it becomes a soft solid, composed of loose crystalline grains. It is then put into barrels with holes in the bottom, through which a black ropy juice, called *molasses*, gradually drops, leaving the crystallized sugar comparatively white and dry. In this state it constitutes *raw* or *muscovado sugar*. This generally concludes the process with the planters in the British colonies; but in many foreign settlements it is usual to purify the raw sugar partially, by covering its surface, in conical shaped vessels, with a layer of moist clay, —the water from which gradually filters through it, carrying off some molasses. Sugar thus treated is called *clayed sugar*, and has lost its crystalline appearance. In this country the raw sugar is purified by boiling a solution of it with white of eggs, or the serum of bullocks' blood, lime-water being commonly used at the same time. When properly concentrated, the clarified juice is received in conical earthen vessels, the apex of which is undermost, in order that the fluid parts may be collected, and afterwards drawn off by the removal of a plug. In this state it is called *loaf, lump*, or *refined sugar;* and the name *double refined* is given when the operations are repeated. Sugar, however, is now mostly refined by what is called the *patent* process; the chief improvement of which consists in conducting the evaporation *in vacuo*, by which means the syrup is concentrated at a low temperature. By this plan there is much less empyreumatic syrup formed; and even a considerable quantity of sugar can be obtained from molasses.

A more regular form of crystallization is given to sugar by carrying the evaporation only a certain length, and then permitting the syrup to cool slowly; but the addition of spirit of wine is necessary in order to make it crystallize, otherwise it forms *barley sugar*. In crystals it is called *brown* or *white sugar candy*, according to its purity; the latter being the purest form in which sugar exists. Sugar candy is the only kind of refined sugar made in China and India: the Chinese sugar-candy, which is of the finest quality, is consumed in the European settlements in the East to the almost total exclusion of other sugar. *Bastards* is a coarse kind of crusted loaf sugar, made from the syrups and other refuse of the best sugar.

Raw sugar should be dry, in large sparkling hard grains, of a clear yellow colour, without smell, and of a strong sweet taste, without any peculiar flavour. It varies very much in quality. It is chosen, for the purpose of refining, by the sharpness and brightness of the grain; and those kinds are preferred which have a peculiar gray hue. Soft-grained yellow sugars, although whiter, are not so fit for refining; for which reason sugars from particular countries are seldom used. The best are those of Jamaica and other parts of the West Indies; while the East India, Java, Manilla, and Siam varieties are generally of low quality.

Refined sugar should be very hard and brittle, of a close compact texture, and break with sharp, semi-transparent, splintery fragments. It should have a brilliant white colour, a pure sweet taste, and should dissolve entirely in spirits.

The use of cane-sugar is said to have originated in China, from whence the plant was conveyed to India, Arabia, and Egypt; through which channels it became early known in Europe, where, however, its culture made little progress until the period of the Crusades (1099-1244), when the increased communication with the East tended to spread a taste for sugar throughout the Western world. In the 12th century, sugar-planting was extensively followed in Sicily; thence, or through the Moors, it passed to Spain, Madeira, and the Canaries; and shortly after the discovery of America the cane was carried to Hayti and Brazil, from whence it gradually spread through the West Indies. Aided by slave labour, sugar soon became the most important staple of those countries; and the supplies required by the European states were long almost exclusively derived from their American settlements,—each generally granting, by means of fiscal regulations, a monopoly of its home market to its own colonies. The subsequent progress of the trade it is unnecessary to detail in this place. Suffice it to say, that, notwithstanding the shock given to industry in the British possessions by the measure of slave emancipation (1838), the exportation of sugar from the different countries from which the European market is chiefly supplied, was estimated in 1839 as follows:—British West Indies and Mauritius, 3,571,378 cwts.; British India, 519,125; Danish West Indies, 450,000; Dutch do., 260,060; French Sugar Colonies, 2,160,000; United States, 900,000; Brazil, 2,400,000; Spanish West Indies, 4,481,342; and Java, 892,475: total, 15,634,380 cwts. Of this fully one-fourth was sent to the United Kingdom, where sugar is more generally used than in any other part of Europe.

The produce of the British sugar colonies formerly exceeded the wants of the home market, and the surplus was generally shipped to Hamburg and other continental ports; but of late years the ratio of the supply to the demand has been entirely changed, partly through the increased wants of our augmented population, and partly owing to the falling off in the sugar crop of our West India colonies, in consequence of the disinclination of the emancipated negroes to the hard labour requisite for the cultivation of the cane. Through the latter cause mainly, the imports from these colonies gradually declined from 4,103,800 cwts. in 1831, to only 2,214,764 cwts. in 1840, and 2,151,217 cwts. in 1841; and as foreign produce was at the same time shut out by a prohibitory duty, the consequence was a rise of price, until, in November 1840, British plantation sugar in bond averaged 57s. 10½d. per cwt.; Brazilian, of nearly equal quality, being at same time only 22s. This difference led, in 1840, to 2316 cwts. of foreign sugar being entered for consumption, notwithstanding the high duty of 63s. the cwt. with which it was burdened. Afterwards our supply was augmented, chiefly by an increased importation of East India sugar, the duty on which had been lowered to the same rate as West India in 1836. Still, down to 1843, the price of raw sugar in Britain averaged from 10s. to 20s. per cwt. higher than on the Continent.

The annexed table shows the total imports into the United Kingdom since 1824, the quantity of different kinds retained for home consumption, the produce of the duty thereon, and the average price of British plantation muscovado sugar, in bond, as taken from the London Gazette:—

Years.	Total Imports.	Retained for Consumption in the United Kingdom.				Produce of Duty.	Price of British Plant. per Cwt.	
		British Plantation and Mauritius.	British E. India.	Foreign.	Total.			
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	L.	s.	d.
1825	3,908,135	2,972,623	107,200	25	3,079,848	4,176,655	38	6
1826	4,419,096	3,430,652	143,312	26	3,573,990	4,950,991	30	7
1827	4,110,018	3,270,885	69,856	186	3,340,927	4,650,192	35	9
1828	4,968,020	3,504,164	97,244	11	3,601,419	5,002,297	31	8
1829	4,856,393	3,421,409	118,400	12	3,539,821	4,896,242	28	7
1830	4,916,004	3,590,041	131,979	24	3,722,044	4,767,342	24	11
1831	5,366,262	3,667,396	113,536	79	3,781,011	4,650,590	23	8
1832	4,867,749	3,575,329	79,600	605	3,655,534	4,394,338	27	8
1833	4,739,292	3,553,450	98,283	71	3,651,804	4,414,302	29	8
1834	4,743,414	3,620,522	121,007	50	3,741,579	4,559,392	29	5
1835	4,448,267	3,757,851	98,680	31	3,856,562	4,667,900	33	5
1836	4,649,161	3,378,144	110,522	33	3,488,399	4,184,165	40	10
1837	4,482,578	3,684,712	270,055	43	3,954,810	4,760,565	34	7
1838	5,030,374	3,491,225	418,375	65	3,909,665	4,656,892	33	8
1839	4,678,219	3,348,298	477,252	49	3,825,599	4,586,936	39	2
1840	4,035,845	3,074,198	518,320	2,316	3,594,834	4,449,070	49	1
1841	4,905,018	2,992,142	1,066,032	257	4,058,431	5,123,986	38	11
1842	4,6[illegible],261	2,940,365	935,997	103	3,876,465	4,884,415		

The 4,035,845 cwts. imported in 1840 (the latest year of which the details are furnished in the official tables) were composed of 2,214,764 cwts. from British W. Indies, 545,007 from Mauritius, 498,730 from E. Indies, 395,215 from foreign West Indies, chiefly Cuba, 215,962 from Brazil, 69,981 from the Philippines, 31,918 from Java, &c., 9250 from Siam, 1625 from Colombia, and 53,303 cwts. from other places. In the same year, 230,000 cwts. were re-exported, chiefly to Germany, Russia, the Netherlands, and Italy.

A considerable quantity of the imports is converted into refined sugar, a manufacture which forms an important branch of industry in Britain; besides which, from 400,000 to 600,000 cwts. of sugar syrup or molasses are likewise imported annually from our West India colonies, mainly for refining. Of the raw sugar thus employed, about 200,000 cwts. yearly (mostly foreign produce) are refined in bond for exportation, under the act 3 & 4 Wm. IV. c. 61. Where a duty has been paid on colonial sugar refined, it is drawn back on exportation, at the rate shown in the tariff, which, up to 1843, was 30s. 8d. per cwt. on single, and 35s. 8d. on double refined. The exports of refined sugar, in 1840, amounted to 235,179 cwts.; of which Italy took 70,066 cwts.; Turkey, 33,376 cwts.; British America, 30,127 cwts.; British W. Indies, 20,038 cwts.; Russia, 15,165 cwts.; Australia, 12,267 cwts.; and Spain, 11,910 cwts. Formerly the exports were much more considerable, owing to the demands of Germany and Prussia, shipments to which have almost entirely ceased, these countries now refining for themselves.

A duty on British plantation sugar imported into England of 1s. 6d. per cwt. was imposed in 1661; which rate was doubled in 1669. The duty was 3s. 4d. the cwt. from 1703 to 1747; 4s. 10d. from 1747 to 1759; 6s. 4d. from 1759 to 1779; 6s. 8d. from 1779 to 1781. It was raised in 1782 to 12s. 3d. per cwt.; in 1791, to 15s.; 1797, to 17s. 6d.; 1803, to 24s. It was afterwards gradually increased to 30s.; which rate, with the exception of a short period at the conclusion of the war, when it stood at 27s., continued till 1819. It was then reduced to 27s., at which it remained until 1833, when it was lowered to 24s., the rate still maintained (1843). *On East India* sugar, the duty from 1793 to 1803 was 37 and 38 per cent. *ad valorem*; afterwards, it was 11s. and 8s. the cwt. higher than the duty on British plantation; but, in 1836, the duties were assimilated, by the reduction of that on East India from 32s. to 24s. per cwt.; leaving, however, the former rate exigible on British sugar imported from any British possession within the limits of the East India Co.'s territory, in which the importation of foreign sugar is not prohibited. *Mauritius* produce was charged the same as East India prior to 1825, when it was made the same as British plantation. *On foreign* sugar, the duty was fixed, in 1825, at 63s., which rate still continues (1843). To all the preceding rates 5 per cent. was added from May 15, 1840, by the act 3 & 4 Vict. c. 1. See Tariff at the end.

The tare allowed in London on British plantation sugar is as follows:—Casks under 8 cwts., 14 lbs.; under 9 cwts., 1 cwt. 7 lbs.; under 10 cwts., 1 cwt. 14 lbs.; under 11 cwts., 1 cwt. 1 qr.; increasing 7 lbs. for every additional hundredweight. The *draff*, 2 lbs. per hhd. and tierce, and 1 lb. per barrel. The terms are two months prompt, or 5 per cent. per annum allowed for cash. East India sugar, 3 months. No discount.

West India sugar is imported in hogsheads, varying in weight from 13 to 16 cwts.; or in tierces of from 7 to 9 cwts. Mauritius is commonly in mats or bags, each weighing from 1 to 1½ cwt.; and East India in bags of from 1 to 1¾ cwt. The box of sugar-candy usually contains about 70 lbs.

BEET-ROOT SUGAR is derived from the juice of the *Beta vulgaris*, chiefly the white variety, by operations nearly the same as those by which cane-sugar is made; though greater nicety is required in rendering the beet-juice crystallizable, on account of its greater rawness, and the smaller quantity of saccharine matter it contains. When this sugar is refined, it is undistinguishable from the other. Five tons of clean roots yield about 4½ cwts. of coarse sugar, which give about 160 lbs. of double-refined, and 60 lbs. of inferior lump-sugar; the remainder is molasses. The beet-root sugar manufacture sprung up in France under the spurious encouragement afforded by the continental system of Napoleon; and in 1841, 142,518 acres were cultivated for this purpose, yielding employment to no fewer than 389 manufactories. It is also pursued, though to a minor extent, in Prussia and Russia. As the expense of the manufacture, however, greatly exceeds the value of the produce, according to the price of colonial sugar, it is only by heavy imposts on the latter, or a system of bounties, that it can be carried on to advantage. The reduction of the duty on colonial sugar was attempted by the French government in 1842, but without success.

In the United Kingdom, the manufacture of beet-root sugar is regulated by the act 1 Vict. c. 57; it is subjected to the same duty as colonial sugar, but none is made.

Maple Sugar is composed of the evaporated sap of the maple-tree (*Acer saccharinum*), cast into moulds about the size of a brick. It is made chiefly in N. America. The quantity produced in Canada has been reckoned at 32,500 cwts., equal to more than 2000 hhds. of West India sugar.

Further information on the subject of this article will be found in *Moseley's Treatise on Sugar*, *Edwards' History of the West Indies*, *Porter on the Nature and Properties of the Sugar-Cane*, *Ure's Dictionary of Arts*, and under the heads INDIA (BRITISH) and WEST INDIES.

SUGAR OF LEAD, more properly *acetate of lead*, is prepared by digesting litharge or other oxides of the metal in pyroligneous acid. It has a singularly sweet and somewhat astringent taste. Sp. gr. 2·57. It crystallizes in white acicular masses; the state in which it generally occurs in commerce. It is used in medicine, dyeing, and calico-printing.

SULPHUR, OR BRIMSTONE (Fr. *Souffre*. Ger. *Schwefel*. It. *Zolfo*), an elementary, combustible, solid, non-metallic substance, of a peculiar yellow colour, and very brittle. It has neither taste nor smell, though when rubbed it has a faint peculiar odour. Sp. gr. after being fused, 1·990. When pure it is bright yellow, and very inflammable; burning with a clear blue flame, and leaving no residuum. It is an abundant product of nature, especially in volcanic districts; and in other places exists in combination with oxygen and sundry metals. It occurs in various forms. Native sulphur, largely imported from Sicily, is in square or oblong masses or blocks, called *rough brimstone*. Stick or *roll sulphur* is chiefly obtained from sulphuret of copper in this country. Sublimed sulphur, or *flowers of sulphur*, is a fine crystalline bright yellow powder, obtained by condensing the vapour of sulphur rapidly in capacious receivers. *Refined sulphur* is that purified by distillation in an iron still, and condensed in an iron receiver kept cool by water. Sulphur is employed for making gunpowder, sulphuric acid, and cinnabar, and for a variety of other purposes in the arts; it is also employed in medicine.

The chief supply of this mineral is obtained in Sicily, our imports from which have greatly increased since 1825, when, owing to a reduction of the import-duty from £15 to 10s. a-ton, and the increased demands of our manufactures, the annual consumption of Sicilian sulphur increased in 12 years from 7000 tons to between 30,000 and 40,000 tons. A great increase likewise took place in the imports into France. In July 1838, the Sicilian government, in consideration of a bonus of 400,000 Neapolitan ducats a-year, granted to a French company a monopoly of the sulphur-mines, the produce of which was to be limited to 600,000 quintals, to be supplied to them at fixed prices; but this monopoly, after an armed remonstrance from Britain, in consequence of its being at variance with commercial treaties, was abolished in July 1840; and the trade is now on its former footing.

Sulphuric Acid (Fr. *Acide Sulfurique*. Ger. *Schwefelsaüre*), when pure, is a colourless oily fluid, acrid, corrosive, and intensely sour; and consists of three equivalents of oxygen, one of sulphur, and one of water. When as pure as usually prepared, it is of the specific gravity 1·847. This acid was formerly obtained by the decomposition of green vitriol, whence its old name of *oil of vitriol*; but it is now procured by burning a mixture of about 8 parts sulphur and 1 of nitre, in a furnace so placed that the resulting fumes may pass into close leaden chambers containing water. The fumes as they arise are absorbed by the water, which gradually becomes a dilute sulphuric acid; and the acid is procured in a concentrated state by evaporation of this solution. The annual amount of this manufacture in Britain is calculated by Mr Brande at 50,000 tons; which, estimated at 10s. per cwt., makes its value £500,000.

There is perhaps no substance more abundantly employed in the arts and manufactures. It is used in medicine. It is employed by bleachers for souring the cloth; by dyers for dissolving their indigo; by calico-printers; by brassfounders, button-makers, gilders, and japanners, for cleaning the surface of the metals with which they work; and by hatters, tanners, paper-makers, and many others. It is also used extensively in many chemical manufactures.

SUMACH (Fr. *Sumac*. Ger. *Schmack*. It. *Sommaco*), a shrub (*Rhus coriaria*) which is a native of Persia and Syria, as well as the S. of Europe. Its shoots, after being cut, dried, and reduced to powder, are used for the purposes of dyeing and tanning. An ounce contains 78 or 79 grains of tannin. Of all astringents it bears the greatest resemblance to galls. It is considered of good quality when its odour is strong, colour of a lively green, well ground, and free from stalks. The best is the Sicilian. Nearly 500 tons are annually consumed in this country.

SUMATRA. [EASTERN ISLANDS.]

SUNN, a material similar to hemp, the produce of the *Cortalaria juncea*, in general use in the hotter parts of Asia for cordage. In India, two kinds are distinguished, *phool* and *boggy*. The first of these is the most esteemed.

SUPERCARGO, a person employed in a ship to oversee the cargo or trade.

SUPPLIES, the sums annually granted to the sovereign by parliament.

SURVIVORSHIP, in life assurance, is a reversionary benefit contingent upon the circumstance of some life or lives surviving some other life or lives, or of the lives falling according to some assigned order. [INTEREST, COMPOUND.]

SUWARROW or SAOUARI NUTS, are a species of Butter Nuts or berries, the produce of a large tree (*Caryocar ruciferum*), which grows in Guiana.

SWEDEN, a country of the N. of Europe, forming the eastern and more important section of the Scandinavian peninsula, lies between latitude 55° 20′ and 69° N., and longitude 11° 10′ and 24° 12′ E.; having N.E. Russian Finland; E. and S. Gulf of Bothnia and Baltic; S.W. Sound, Cattegat, and Skager Rack; W. and N. Norway. Area, 170,000 sq. miles. Population in 1839, 3,109,772. Government, a hereditary monarchy, with a state-council and a representative diet.

Sweden may be generally described as rather a flat country; except the frontier towards Norway, and the N. part, which is diversified with mountains, deep valleys alternating with sandy wastes, and in some parts forests. The central region contains extensive plateaux of table-land, covered with trees. And the S. provinces consist chiefly of sandy plains, interspersed with lakes and hills, which are sometimes bleak and barren, but elsewhere clothed with woods. The country is watered by numerous lakes and rivers; and the use of both for internal navigation is facilitated and extended in some places by canals; the chief work of this kind being the celebrated Gotha Navigation from Gottenburg to Soderkœping, connecting the Cattegat and the Baltic. The climate in the S. and W. parts is similar to that of the N. of Germany; but towards the N. it is severe, though much milder than might be expected from its high latitude.

The soil, though mostly thin and poor, has been greatly improved by culture, especially around Carlstad and Lake Wetter. The chief agricultural products are—rye in the S. and barley in the N.; potatoes, oats, and maslin, with small quantities of wheat and pease; and the supply is now more than equal to the consumption. Flax is also grown, and in some places madder, buckwheat, woad, and tobacco. Domestic animals are numerous, but inferior. The chief articles for export are derived from the mines and the forests, particularly the former, which are mostly situated in the central provinces; their chief product is iron [Iron]; copper and lead, however, being also worked to some extent; but there is no coal. The forests, though covering nearly one-half of the surface, contain a comparatively small number of timber trees; and the export of wood is, from this cause, not so considerable as might at first be supposed.

The manufactures are chiefly domestic, the peasantry supplying themselves, as winter employment, with nearly all the coarse woollens, linens, and cottons required by them. There are, besides, a good many cloth factories, with sugar refineries, distilleries, leather, paper, soap, tobacco, and glass works: the other manufactures are trifling.

The trade of Sweden has been reduced below its natural limits by the restrictive duties imposed by the government, with the view of protecting home manufactures; but latterly this system has been relaxed; and, at the same time, exportation encouraged by the reduction, in 1840, of one-half the customs on bar-iron, and the cessation, in 1842, of those on wood. Exports, principally iron (about 70,000 tons annually); with timber, linseed, copper, alum, corn, tar, cobalt, and other articles. Imports, chiefly sugar, coffee, and other tropical products; salt, wines, silk, wool, cotton, cotton twist, cotton manufactures, hemp, hides, skins, and oil. In 1840, the exports were officially valued at 20,434,000 rixdollars banco (£1,700,000); and the imports at nearly the same. The chief commercial relations are with Britain, the United States, Holland, the Hanse Towns, and Denmark. The trade with Britain consists in exchanging iron (16,000 tons), linseed, battens, and deals, and occasionally a little oats and barley, for manufactures (mostly cotton twists and woollens), wine, coffee, indigo, and spices.

Ports.—*Stockholm*, the capital, chief manufacturing seat, and principal commercial emporium, lies on the E. coast, partly on a number of small islands, at the junction of Lake Mælar with the Baltic, in lat. 59° 20′ N., long. 18° 4′ E. Pop. 85,000. The entrance to the port is difficult, but the harbour is deep and capacious, the largest vessels lying close to the quays.

Gottenburg is advantageously situated at the W. entrance of the Gotha navigation, at the head of a fiord near the Cattegat, in lat. 57° 42′ N., long. 11° 56′ E. Pop. 28,700. The harbour is formed by two long chains of rocks, protected at its mouth by Fort Nya-Elfsborg.

Measures, Money, &c.

Measures and Weights.—The aln or ell of 2 feet = 23·38 Imp. inches; and 100 ells = 64·94 Imp. yards; the fathom is 3, and the ruthe 8 ells. The Swedish mile = 2250 ruthes = 11689 Imp. yards, or about 6 Imp. miles, 5 furlongs.

The tunnaland = 1·220 Imp. acre.

The kann, liquid measure, contains 2 stoops, or 8 quarters; and 100 kanns = 57·56 Imp. gallons; the anker is 15, the eimer 30, the tunna 48, the ahm 60, the oxhufvud 90, the pipe 180, and the fuder 360 kanns.

The tunna, corn measure, of 2 spann, 8 fjerdingar, 32 kappar, or 56 kanns, = 4·029 Imp. bushels; but as 4 kappar are allowed to every tunna of wheat, oats, rye, or barley, for good measure, the tunna of corn may be estimated at 4½ Imp. bushels.

The commercial weight is termed *victualie-wigt*; and the pound or *skolpund*, victualie-wigt, of 2 marks, 32 lods, or 128 quentins = 8848 Dutch as = 6563 troy grains; also 100 lbs. victualie-wigt = 93·76 lbs. avoirdupois. The lispund is 20 lbs. victualie-wigt; the sten, 32 lbs.; the centner, 120 lbs.; the waag, 165 lbs.; and the skeppund is 20 lispunds or 400 lbs. victualie-wigt.

The mark, *berg-werk-wigt*, or miner's weight, = 5801 troy grains. The mark, *land-staten-wigt*, or country and city weight, = 5526 troy grains. The mark, *jern-wigt*, or *stapelstad-wigt*, for weighing iron and commodities in *entrepôt*, = 5250 troy grains: the jern-wigt is ⅘ths of the victualie-wigt.

The apothecaries' pound of 12 ounces, each of 8 drams or 24 scruples, = 5501 troy grains.

The gold and silver mint mark of 16 lods, or 64 quentins, = 3252 troy grains.

Money.—Accounts are stated in riksdalers of 48 skillings, each of 12 rundstycken or ore.

The principal coins are the gold ducat, worth 9s. 2d. nearly; the silver species-riksdaler 4s. 4½d., and daler of 8 skillings, 8¾d.; also, in copper, the daler of 2⅔ skillings, 3d.; pieces for 1, 2, and 3 skillings; rundstycken, and half rundstycken.

Gold and silver coins, however, are now rarely used, the circulating medium being composed almost entirely of copper, and a depreciated paper money. The paper is of two kinds: *Banco*, consisting of the notes of the National Bank, is that in which merchants' accounts are generally reckoned: *Riksgald*, or government paper, is that commonly employed by shopkeepers, and in small payments. Since 1835, rixdollars banco are exchanged for rixdollars specie, at the rate of 2⅔ of the former for one of the latter. Riksgald is of only ⅔ds the value of banco; 2 riksdalers banco being reckoned equal 3 riksdalers in riksgald. The rixdollar is thus worth—in banco, about 1s. 8d.; and in riksgald, 1s. 1⅓d. sterling.

The paper money includes notes so low as 8 skillings banco, about 3⅓d. sterling.

The Revenue, according to the budget of 1842, amounted only to 10,742,880 rixdollars banco, or £795,240, the country being very lightly taxed.

SWEETS, an English fiscal name for home-made wines and sweetened spirituous compounds. The trade between the different portions of the United Kingdom is regulated, in respect to countervailing duties and drawbacks, by the act 6 & 7 Wm. IV. c. 72. Every retailer is required to take out an annual excise-license, costing £1, 1s.

SWITZERLAND, a country of Central Europe, bounded N. and E. by Germany; S. by Italy; and W. by France. Area, 15,257 sq. miles. In 1838, the population was 2,188,000. It is a confederation of 22 states or cantons, namely, Schaffhausen, Thurgau, Zurich, Aargau, Basle, Soleure, Berne, Lucerne, Zug, Schweitz, St Gall, Appenzell, Glarus, Uri, Unterwalden, Friburg, Neufchatel, Vaud, Geneva, Valais, Tessin, Grisons; all democratic republics except Neufchatel, in which the King of Prussia exercises sovereignty.

Switzerland is the most mountainous country of Europe. The ranges of the Alps, and their numerous offsets, extend over the S. and S.E. districts, occupying about one-half of the surface. Along the W. boundary runs the Jura ridge; and the country between these two mountain-systems has towards the S. the form of a plain, interspersed with isolated hills; and towards the N. it is traversed by groups of hills of moderate elevation. The Alpine and other mountain-chains are separated by deep valleys or narrow plains, which form the beds of extensive lakes, as Geneva, Constance, Neufchatel, Lucerne, and others; or the basins of large rivers, such as the Rhone, Rhine, Inn, Ticino, and Doubs, which all rise in Switzerland. This difference of elevation produces a singular variety of aspect and climate; for, while the valleys are scorched by heat, perpetual winter reigns in the heights: but, upon the whole, the country is cold for its latitude.

Switzerland is almost wholly a pastoral country. Except in Thurgau, little corn is produced; and cattle (800,000), sheep, and goats, constitute the chief riches of the rural population. The land is mostly divided among numerous small proprietors, whose diminutive patches occupying but a part of their time, they are necessarily led to employ the remainder in weaving and such like employments, in which they engage for a mere pittance of wages. This, joined to low fiscal burdens, and the absence of all restrictions on trade or free intercourse with foreigners, has led to manufacturing industry being in a considerable state of advancement in Switzerland, notwithstanding its geographical disadvantages. The chief sites are the German cantons of Appenzell, St Gall, Thurgau, Zurich, Aargau, and Basle, distinguished for their cotton and silk fabrics; and the French cantons of Geneva and Neufchatel, for their watches and jewellery.

The principal exports are silks, cottons, lace, watches, jewellery, straw-plat, cattle, cheese, wine, and liqueurs. The imports consist of wheat (mostly from S. Germany), salt, wine, oil, colonial produce, woollens, leather, hemp, flax, tobacco, cotton wool, cotton twist, hardware, iron and other metals, fancy wares, drugs and dyes. The chief commercial relations are with the adjoining states and England. Much of the intercourse with foreign countries is conducted by way of Trieste and Genoa. Switzerland, besides, possesses a considerable share of the transit trade between Germany and Italy, Austria and France. The roads are almost every where good; but carriage is costly, owing to the rugged nature of the country.

Chief cities, Geneva, Basle, Zurich, Berne, St Gall, Lausanne, Schaffhausen and Appenzell.

MEASURES, MONEY, &c.

Measures and Weights.—In 1837, Berne, Zurich, Lucerne, Friburg, Zug, Soleure, Basle, Aargau, Thurgau, Schaffhausen, Glarus, and St Gall, adopted the following measures and weights founded upon the French metrical system:—

The foot = 3 decimètres; and 16,000 feet = 1 stunde = 5249 Imp. yards. The ell = 6 decimètres; and 100 ells = 65·62 Imp. yards. The mass = 1½ French litre; and 100 mass = 33·01 Imp. gallons. The viertel = 10 mass = 1·65 Imp. peck; and 100 viertels = 41·26 Imp. bushels. The pound of 32 loths = ½ kilogramme; and 100 pounds = 110·24 lbs. avoirdupois.

In the other cantons, the measures and weights occasion great confusion.

Money.—The most general mode of accounting is in francs, of 10 batzen, or 100 rappen. The Swiss franc (in silver) = 1 French franc 48 centimes = 1s. 1$\frac{9}{10}$d. sterling; but in exchanges its value is in general slightly enhanced, from being reckoned in gold, at the rate of 16 to the French louis d'or = 18s. 9½d.

In Geneva, accounts are kept in French francs and centimes. Usance of bills from Holland, Britain, and France, 30 days' sight; from Germany and Italy, 15. Days of grace abolished.

T.

TAEL, a Chinese weight; also a money of account. [CHINA.]

TALC, a mineral allied to mica, used in tracing lines on wood, &c.

TALLOW (Fr. *Suif.* Ger. *Talg.* It. *Sego.* Por. and Sp. *Sebo.* Rus. *Salo, toplenœ*), animal fat separated by fusion from the membrane in which it occurs, and clarified. It is procured chiefly from oxen and sheep. It is firm and brittle, has a peculiar odour; and is applied to various uses, but particularly to the manufacture of soap and candles, and the dressing of leather. Tallow is an important article of trade in the United Kingdom, where, in addition to the native supply, estimated at 120,000 tons, about 60,000 tons are annually imported: which last, excepting trifling quantities from the La Plata states and Sicily, is brought almost exclusively from Russia.

The exports from Russia average about 65,000 tons annually, 9-10ths of which are shipped from St Petersburg, where five kinds are distinguished: 1. Yellow candle, in two sorts: this kind is obtained from oxen, and about 6-7ths of the whole shipments are composed of the first sort. 2. Lopatny, in one sort, called second candle. 3. White candle, in two sorts, procured from sheep and goats. 4. Siberia soap, in three sorts: this kind is a mixture of Kalmuc sheep and oxen fat. 5. Ordinary soap, in three sorts: it is chiefly derived from Kalmuc sheep.

Russian tallow is shipped in casks weighing from 8 to 10½ cwt. gross each. The tare fluctuates from 10 to 12 per cent. The braacking and taring take place on delivery for shipment.

TAMARIND, the fruit of the *Tamarindus Indica*, is a pod containing a viscid acid pulp, connected with the seeds by tough strings or fibres.

TAPIOCA, a nutritive substance prepared from the starch of the farinaceous roots of the *Jatropha manihot*, or cassava plant, extensively cultivated in S. America, especially Brazil. It is imported in pearl-like globules, tinged with red.

TAR (Fr. *Goudron*. Ger. *Theer*. Rus. *Degot*, *Sinola shitkaja*. Sw. *Tjärra*), a thick empyreumatic oil, of a dark-brown or black colour, obtained by burning pine and fir trees in a close smothering heap, with a channel through which the tar exudes. It is chiefly used for resisting moisture in ships and outhouses. It is largely made in Russia, from whence about 12,000 lasts are annually imported into Britain, besides nearly 2000 lasts from Sweden and the United States. The last contains 12 barrels, each of 26¼ Imp. gallons.

TARE (from the Italian *tarare*, to abate), is a deduction from the *gross* weight of goods on account of the package in which they are contained: the remainder is called *net* weight. It is often fixed as to particular commodities by a conventional rule among merchants, in which case it is called customary tare, in contradistinction from the real tare ascertained by measurement. *Trett*, *Draft*, and *Cloff*, are old allowances of the same kind, now nearly obsolete.

TARES OR FITCH, a species of pulse (*Vicia sativa*) cultivated as herbage.

TARIFF, a table of duties payable on goods imported or exported. The British tariff has undergone five important alterations since the commencement of the present century, namely, in 1809, 1819, 1825, 1833, and 1842. The last, which contains numerous important reductions on the duties on the importation of live-stock and provisions, will be found at length at the end of the present volume.

TARTAR (Fr. *Tartre cru, blanc et rouge*. Ger. *Roher Weinstein*. It. *Tartaro volgare*), an acidulous salt which exists in the juice of the grape, and is deposited in wine-casks in the form of a crystallized incrustation, more or less thick, which is scraped off. This is crude tartar, or *argol*. It is either white or red according to the colour of the wine: the former is preferred, as it contains fewer impurities than the red; but the properties of both are essentially the same. When good, it is thick, hard, brittle, and brilliant, with but little earthy matter. The German or Rhenish argol is reckoned the best; after which that from Bologna. It is also brought from Florence, Naples, Sicily, and the Cape of Good Hope. It is used in hat-making, gilding, dyeing, and in the preparation of tartaric acid.

TARTAR [CREAM OF], (Fr. *Crême de tartre*. Ger. *Weinstein rahm*. It. *Tartaro purgato*), the bitartrate of potassa of chemists, is argol or crude tartar purified by solution and crystallization. It occurs in small, irregular, gritty crystals, or in the form of a fine white powder. It has an acid harsh taste. Cream of tartar is used in medicine and the arts.

TARTARIC ACID is procured chiefly from white argol by the action of prepared chalk and sulphuric acid. The crystals formed are of considerable size, permanent, without smell or colour, and very acid to the taste. It is used in many of the arts, particularly dyeing and calico-printing; and is much employed as a cheap substitute for citric acid in lemonade and effervescing solutions.

TAX, a portion of the produce of the capital and labour of a country, placed at the disposal of the government. Security, protection, and good order being productive of *universal* advantage, it is obvious no individual can complain that he is made to contribute in the same proportion to his means as others for their attainment. Still, like all other values, the smaller the sacrifice for which they can be obtained so much the better. Every mode by which the expenses of government can be diminished and taxation reduced is an advantage to the public, precisely of the same kind that a diminution in the cost of procuring any commodity is to an individual. Hence, the best plan of finance, says M. Say, is to *spend little;* and the best of all taxes the *least*.

The general principles which, according to Adam Smith, should regulate all taxes are the following:—1*st*, The subjects of every state ought to contribute towards the support of the government as nearly as possible in proportion to their respective abilities,—that is, in proportion to the revenue which they respectively enjoy under the protection of the state. 2*d*, The tax which each individual is bound to pay ought to be certain and not arbitrary. The time of payment, the manner of payment, the quantity to be paid, ought all to be clear and plain to the contributor, and to every other person. *3d*, Every tax ought to be levied at the time and in the manner in which it is most likely to be convenient for the contributor to pay it. *4th*, Every tax ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible over and above what it brings into the public treasury. Perhaps these principles are as just and comprehensive as they can be made; and that system of taxation is best which conforms most nearly to them.

Taxes must ultimately fall either on *revenue* or *capital*. There is perhaps no single tax which is not partly derived from each of those sources. But, assuredly, the largest proportion of all taxes, judiciously imposed, is paid out of revenue; the desire to preserve their place in society, to preserve their capitals unimpaired, and to improve their condition, stimulating most men to endeavour to discharge the burden of a moderate tax by an increase of labour or of saving. A tax, however, is not necessarily a tax on capital, because it is laid on capital, or a tax on income because it is laid on income. A moderate tax laid on capital may be, and generally is, defrayed from a saving of income; while an oppressive tax laid on income has in most cases to be paid out of capital. But of all taxes those are the most injurious which necessarily fall on capital; for every such tax, by diminishing the funds destined to support productive industry, lessens the revenue of the people, —the only source from which taxes can be permanently paid; and thus lays the sure foundation of national poverty and distress.

A tax is said to be *direct* when it is immediately taken from income or property; and *indirect*, when it is imposed on the articles on which the income or property is expended. All taxes are disliked, and the more directly they are imposed, the more hateful they become. Hence, in most countries, the number and amount of direct taxes are small compared with those which are levied indirectly. The latter always meet with a more cheerful acquiescence on the part of the people, being felt the least, because no formal demand is made upon them; while they can often be so wisely contrived, that the consumer shall scarcely know that he pays them. Besides, when placed upon the proper description of articles,—as luxuries,—the payment of them becomes optional. The facility, however, with which indirect taxes may be levied, renders it necessary to consider the incidence and effects of them with peculiar caution.

If a duty be levied on a particular commodity, its price will sustain an equal rise; for if it did not, the profits of the producers would be sunk below the common level, and their business would be abandoned. But it depends on the circumstance of the commodity being a *luxury*, whether a tax on it will fall wholly on the consumer. In so far as *necessaries* are used by persons of property, taxes on them are also defrayed by the consumers; but, in so far as they are required by labourers, the effect of taxes on them differs in no respect from the effect of equal imposts laid directly on wages,—at least in those cases where the wages are as low as is consistent with the preservation of the number of labourers.

Taxes should be allowed to interfere as little as possible with the progress of national wealth; and it should always be an object to derive them from the results of the successful employment of capital and industry, and not to press them upon any intermediate stage of production. Hence taxes upon raw materials are objectionable. They increase the price of such materials, and thus limit the power of the manufacturer to purchase them, and to employ labour in augmenting their value; while, by increasing the price of the exported manufactures, they limit the demand for them abroad. Taxes upon home manufactures are liable to similar objections, since, by increasing the price they diminish the consumption, and consequently discourage the manufactures, and the employment of labour and capital. On the other hand, luxuries are a fair subject of taxation. Taxes upon such articles do not interfere with industry or production; but care must be taken to proportion the charge in each case to the value of the commodity. Excessive duties are less productive than moderate duties; while the causes of their failure are injurious to public wealth by discouraging consumption, and to its morals, by offering an inducement to smuggling. Experience alone can show the precise rate at which the revenue is most productive, consistently with an unchecked consumption and an absence of contraband dealing; but it may be assumed, that whenever a tax adds very greatly to the price of an article of general consumption, it puts it out of the reach of many who are desirous to purchase it, and creates, by the chance of a large profit, a temptation to evade the payment of the duty. When a country possesses any exclusive, natural, or acquired advantage, in the production of commodities, as Great Britain in coal, China in tea, and Russia in tallow, an export duty is perhaps the most unexceptionable of all taxes, from its falling wholly on the foreigners by whom the articles exported are bought and consumed. Care should be taken, however, not to impose such a duty on commodities which can be produced at nearly the same cost abroad, for its effect would then be to put an entire stop to their exportation, by causing the market to be supplied by others. Care must likewise be taken that the imposition of an export-duty does not provoke injurious retaliation from foreign states.

The only legitimate object of taxation is revenue; but duties are often imposed on the importation of merchandise without reference to this object, and solely with the view of directing trade into particular channels. Thus *protective* duties are imposed for the purpose of artificially raising the price of the productions and manufactures of foreign countries, so as to restrain or prevent their competition with similar articles produced at home; and *discriminating* duties, or duties not levied equally upon the produce or manufactures of different countries, are imposed (in Britain now solely with reference to the colonial trade), with the view of giving an advantage to the country on whose commodities the tax is lightest as compared with others. The impolicy of all such duties has been already explained in the article COMMERCE.

TEA (Chin. *Cha*, *Te*. Du. *Te*. Fr. *Thé*. Ger. *Thee*. It. *Te*. Por. *Cha*. Rus. *Tchai*. Sp. *Te*), the leaf of an evergreen shrub (*Thea*), 3 to 6 feet in height, resembling a myrtle, and bearing a white blossom something like a wild rose. The leaves, elliptic, serrated, and alternate, are classed as *black* and *green*; but it is still uncertain whether these are obtained from one or more species, or from varieties of the same species. The plant is a native of China and Japan; it is also cultivated in Java, Assam, and other places; but at present the only commercial source of tea is China, where it is grown in almost every province except the most northerly, though the finer kinds are confined to a few localities. Formerly, all the black tea was brought from the province of Fo-kien, and the green from that of Kiang-nan; but the culture of the first for exportation is now extended to Quang-tung, and of the other to Tche-kiang. From these places it has hitherto been conveyed, from 400 to 700 miles, mostly by land-carriage, to Canton for shipment; but, under the late treaty with Great Britain, it will doubtless find its way to nearer ports.

The plant is propagated from seeds, which are deposited in rows. The first crop of leaves is not collected until the third year; and when the trees are six or seven years old, the produce becomes so inferior that they are removed. There are commonly three gatherings of the leaves yearly,—in April, Midsummer, and August. The earliest possess the most delicate colour and aroma; leaves of the second gathering have less valuable qualities; and those last collected are of a dark colour, large, coarse, and so inferior that they are consumed only by the poorest of the natives. After being gathered, and partially dried by exposure to the sun, they are farther dried in a heated pan. They are then removed to a table where they are rolled and cooled; after which they are sifted and sorted into several varieties. The object of the drying and rolling is both to diminish the bulk and to enable the leaves to preserve their flavour.

Descriptive Table of the Principal Teas.

Black Teas.

1. *Bohea* is a coarse leaf, distinguished by containing a larger proportion of the woody fibre than other teas; its infusion is of a darker colour, and as it has been more subjected to the action of fire, it keeps longer without becoming musty than the finer sorts. Two kinds are brought from China: the lowest called Canton bohea, is a mixture of refuse congou with a coarse tea called woping. The better kind of bohea comes from the district of that name in Fo-kien, and having been of late esteemed equally with the lower congous, has been packed in the same square chests, while the old bohea package is of an oblong shape.

2. *Congou* (a derivation from *Koong-foo*, "labour or assiduity") long formed the bulk of the East India Company's cargoes; but the quality gradually fell off; and of late the consumption of bohea has increased in this country to the diminution of congou, the standard of which has been considerably lowered. A particular variety called *campoi* (from *Kien-poey*, "selection," or "choice"), has ceased to be prized from the absence of strength,—a characteristic generally esteemed beyond delicacy of flavour.

3. *Souchong* (from *Seaou-choong*, "small or scarce sort") is the finest of the stronger black teas, with a leaf that is generally entire and curly, but younger than in the coarser kinds. *Padre souchong*, packed in separate paper bundles of about ½ lb. each, is so fine as to be used almost exclusively for presents. The finest kinds of souchong are sometimes scented with flowers; and they cannot be obtained, even in China, except at high prices. An exceedingly crisped and curled leaf, called *sonchi*, has lately grown into disrepute, from being often mixed with a ferruginous dust.

4. *Pekoe*, being composed mainly of the young spring-buds, is both dear and small in quantity. With a view to preserve the fineness of flavour, the application of heat is very limited in drying, whence this kind is more liable to injury from keeping than any other sort.

Green Teas.

1. *Twankay*, the bohea of green teas, has always formed three-fourths of the whole of those teas imported, being used by the retailers to mix with the finer kinds. The leaf is older, and not so much twisted or rolled as in the dearer kinds: there is altogether less care bestowed on its preparation.

2. *Hyson-skin* is an inferior kind of hyson; all those leaves that are of a coarser, yellower, and less twisted or rolled appearance, are set apart

and sold as the refuse, or "skin tea," at a much lower price.

3. *Hyson* (corrupted from the Chinese term for "flourishing spring"), is a fine sort gathered in the early part of the season. Every leaf is twisted and rolled by hand; and, on account of the extreme care required in its preparation, the best is difficult to procure, and very expensive.

4. *Gunpowder* is nothing but a more carefully-picked hyson, consisting of the best rolled and roundest leaves, which gives it that granular appearance whence it derives its name.

5. *Young Hyson*, until spoiled by fraudulent mixture to meet the large demand of the Americans, was a genuine delicate young leaf, called in China *Yu-tsien*, "before the rains," because gathered in early spring.

In collecting green tea, the leaves only are taken, being nipped off above the foot-stalk, while of the black teas the foot-stalk is always collected. Thus black tea contains much of the woody fibre, while the green is exclusively the fleshy part of the leaf itself. Green tea is thus dearer than black; it besides does not keep so long, and is less able to contend with the chances of injury during a long sea-voyage. Black tea, likewise, abounds much more in strength. On these grounds it forms the great bulk of the importations into Britain. In the United States, however, the demand for green tea is more considerable than for black.

Tea must have been used in China from a remote period; but it was unknown in Europe until the beginning of the 17th century, when it was introduced by the Dutch. It was carried from Amsterdam to London. Afterwards small quantities were brought to England by the East India Company; but it did not become an object of trade with them until about 1678, when they imported 4713 lbs. In the beginning of the last century it came more into use; and in 1746, the quantity consumed increased to 2,358,589 lbs.; in 1768, to 6,892,075 lbs.; in 1785, to 10,856,578 lbs.; in 1800, to 20,358,702 lbs.; and in 1833, to 31,829,619 lbs. Hitherto the East India Company had enjoyed a monopoly of the British trade, and the price of tea was in consequence much higher than in other countries: but their exclusive privileges were abolished, April 22, 1834, when the trade was thrown open, subject to the regulations of the act 3 & 4 Wm. IV. c. 101. The competition of private traders afterwards reduced the price; and the quantity consumed in the United Kingdom increased in 1835 to 36,574,004 lbs.; and in 1836 to 49,142,236 lbs.! The war with China and distressed condition of our manufacturing population, subsequently led to a great falling off in the consumption; but in 1841 it amounted to no less than 36,396,078 lbs. From 2,000,000 to 4,000,000 lbs. are besides annually imported for re-exportation, chiefly to British America and Germany.

Tea is also largely consumed in the United States; considerable quantities are likewise used in Holland and in Russia, which last country is supplied overland by way of Kiachta. In other parts, the consumption is quite inconsiderable.

The British duties on tea have varied greatly at different periods. From 1819 to 1834, an *ad valorem* excise duty was levied of 96 per cent. on all teas sold under 2s. per lb., and 100 per cent. on all that were sold at or above 2s. per lb. In 1834, tea was removed from the excise to the customs department of the revenue, when there were imposed—on bohea, 1s. 6d. per lb.; on congou, twankay, hyson-skin, orange pekoe, and campoi, 2s. 2d. per lb.; and on souchong, hyson, flowery pekoe, and other kinds not enumerated, 3s. per lb. These rates ceased July 1, 1836; since which a fixed duty of 2s. 1d. per lb. has been imposed on all teas.

TEAK, a large Indian tree (*Tectona grandis*), having a trunk erect, lofty, and of an enormous size. It has some resemblance to oak in its timber, but its quality is reckoned preferable for shipbuilding; and the country ships of India, as well as many of the vessels trading between India and this country, are constructed of it. It is easily worked, and at the same time strong and durable. Alternate exposure to a vertical sun and to the drenching rain of the wet monsoons, which would rend in pieces European oak, produce no injurious effect upon teak. Being of an oily nature, it also possesses the valuable property of preserving iron, while oak destroys it. The teak most esteemed is grown in the Ghauts. There are also extensive forests of it on the banks of the Irrawady in Birmah; and it is largely exported from Rangoon to Calcutta and other parts of India. Its quality, though inferior to that of Malabar for shipbuilding, has been found fitter for machinery.

AFRICAN TEAK is a name improperly given to a species of timber largely imported from Sierra Leone. Though for some purposes useful, it is destitute of several of the most valuable properties of teak, and is, in fact, the product of an entirely different tree.

TEXAS, a republic of N. America, between the United States and Mexico, extending from latitude 26° to 38° N., and from longitude 94° to 107° W. Area, 310,000 sq. miles. Population, 350,000. Texas is an integral not a federal republic.

Texas was formerly a province of Mexico; but having been peopled chiefly by Anglo-Americans, disputes arose, and afterwards an insurrection, which resulted, April 21, 1836, in its independence, by the defeat of Santa Anna, the Mexican president, at San Jacinto. It is both a fine and a fertile country, mostly level, and well suited for the growth of cotton, which is its agricultural staple. The grains chiefly cultivated are maize and wheat; but the rearing of live-stock forms the principal occupation, especially in the prairies. Slavery exists, and industrial progress is mainly dependent on its continuance, as the climate is too hot and relaxing for free labour. The position of the country, however, is favourable for trade; and in exchange for cotton and other products sent to Britain, partly by way of New Orleans, the Texians import manufactures, &c. There is also a considerable inland trade with the United States, at Santa Fe, to which goods are brought by way of Pittsburg and St Louis. The Texan ports are, Galveston, Matagorda Bay, and Aransas. The currency and weights are similar to those of the United States; but some of the measures are Mexican. Texas was recognised by the United States, March 3, 1837; and treaties were concluded with France, September 25, 1839, and with Britain, November 16, 1840. For further information, see *Kennedy's Texas.*

THREAD (Fr. *Fil.* Ger. *Zwirn.* Du. *Garen.* It. *Refe.* Por. *Fio.* Sp. *Hilo, Torzal.* Rus. *Nitki*), a small line, formed by twisting together fibres of flax, cotton, or silk. The various kinds used in sewing, and in making bobbin net, and some other textile fabrics, consist of two or more *yarns*, firmly twisted together.

TILES (Fr. *Tuiles.* Ger. *Dachziegel*), a kind of thin brick, or plate of baked clay, used chiefly for covering roofs, but occasionally also for paving floors and making drains. Down to 1833, an excise duty was levied in Britain on tiles.

TIMBER, wood adapted for house or ship building. The trade in timber is one of great extent and importance. A considerable portion of that (Oak) used in ship-building is of home-growth, but the greater portion of that (Pine) employed in house-carpentry is imported,—the sources of supply being the countries around the Baltic, especially Prussia and Norway, and our colonies in N. America. The produce of the N. of Europe is generally of excellent quality; but much of the colonial timber is very inferior. Teak is brought from Africa, mahogany from Honduras and other places, and cabinet and dye woods from a variety of quarters; but these scarcely enter into competition with the timber of N. America and the Baltic. The duty on foreign timber was, in 1787, only 6s. 8d. the load of 50 cubic feet; but it was gradually raised until, in 1804, it amounted to 25s. In 1810, it was raised to 54s. 8d.; and from 1814 to 1820, it was 64s. 11d. and 65s. the load. Colonial timber was admitted free until 1798, when a duty was imposed of 3 per cent. *ad valorem*; but the trade in this kind scarcely existed prior to 1803, when the duty was changed to a specific rate of 2s. per load; which, however, was abolished in 1806. From this year colonial timber was admitted free until 1821, when a duty of 10s. the load was imposed, and at same time the duty on European timber reduced from 65s. to 55s. the load, leaving a preference duty in operation of 45s.; which system continued till 1842. These differential duties led to the substitution of the inferior timber of N. America for the superior produce of the N. of Europe. The average annual importation of N. American timber, only 16,533 loads in the five years from 1803 to 1807, gradually increased, until, on an average of the five years, 1829-1833, it amounted to 412,682 loads; while the importation of Baltic timber fell off in the same period from 232,477 loads to 122,783 loads. In 1841, the consumption of foreign and colonial timber in the United Kingdom, and the duty derived therefrom, were as follow:—Battens, deals, and staves, 177,058 great hundreds (120), £778,990; timber, 8 in. sq. and upwards, from British America, 613,679 loads, £337,795; do. from other parts, 131,479 loads, £370,302: making in all, of revenue, £1,487,087.

Proposals for a reduction of the timber duties were made by Earl Grey's government in 1831, and by Lord Melbourne's in 1841; but nothing was effected until 1842, when the duty on colonial timber was reduced to 1s. per load. At same time, foreign timber was lowered to 30s. the load; deals, 35s.; and after October 10, 1842, to 25s. and 30s. respectively. The mode of charging the duty was also improved. Formerly it was disproportionably heavy on the smallest and least valuable kinds of deals, battens, and planks; while, in measuring unsawn timber, the cubic contents were, it is alleged, over-estimated from 10 to 20 per cent.; and the sawers complained that timber partly cut up was charged proportionally lower than in the log, by which their interests were needlessly injured.

TIN (Fr. *Fer blanc.* Ger. *Weissblech*), a white brilliant metal. Its surface is but slowly impaired by exposure to the atmosphere, nor is it oxidized even by the combined agency of air and moisture. Its malleability is very considerable. In ductility and tenacity it is inferior to several metals. It is soft and inelastic. Sp. gr. 7·2. Fusing point, 442° Fahr. It is employed, when in a liquid state, in *tinning* or covering iron and copper plates, to protect them from rust; also in the fabrication of a great variety of utensils. Alloyed with lead it forms pewter. It is likewise used in the process of enamelling; in silvering looking-glasses; by dyers, when solved, to heighten red colours; and for many other purposes.

Tin is rather a scarce metal: it is principally found in primitive rocks, and occurs disseminated in them, and in beds, but principally in veins, mostly in a state of crystallization, being rarely compact, and is frequently accompanied by other minerals. The ore from which it is chiefly obtained is an oxide of the metal. Tin is found abundantly in Cornwall and the western part of Devonshire: it is also procured in Germany, Bohemia, and Hungary, in Europe; in Chili and Mexico, in America; and in Malacca and Banca, in Asia.

British Tin.—The annual produce of the tin mines and works of Cornwall is estimated at 4000 tons, worth from £65 to £80 a-ton. About 30,000 cwts. of unwrought tin are annually exported from Britain, chiefly to France, Italy, and Russia; which is exclusive of tin and pewter wares and tin plates, in declared value nearly £400,000, sent to the United States, Italy, Germany, France, the colonies, &c. From 10,000 to 30,000 cwts. of Banca and Malay tin are besides imported for re-exportation to the continent and the United States.

TINCAL. [Borax.]

TOBACCO (Du. *Tabak*. Fr. *Tabac*. Ger. *Taback*. It. *Tabacco*. Por. & Sp. *Tabaco*. Rus. *Tabak*. Arab. *Bujjerbang*. Mal. *Tambracoo*. Chin. *Sang-yen*), the dried stimulating narcotic leaves of a plant indigenous to America, but extensively cultivated in the Old World,—its use, either for smoking, chewing, or snuffing, being now common in all countries. There are several species,—the principal being the *Nicotiana Tabacum*, grown in Virginia, the great commercial source of the "weed." It is an annual herb, raised from seeds sown in March in prepared protected beds, from which it is transplanted in May; and it attains perfection in September. It has then a stem from three to six feet in height, bearing large oblong spear-shaped leaves, which, after being gathered, and *cured* by fermentation and drying, are ranged horizontally and pressed in the hogsheads in which they are exported; the finest, however, being generally made into a kind of *rolls*. Tobacco requires considerable heat to come to perfection, but with care it may be reared in temperate climates; and it is thus cultivated to a great extent in Holland, France, Prussia, and other countries, in several of which the trade is, for fiscal purposes, monopolized by the government. For a more detailed account of the rearing of tobacco, see *Porter's Tropical Agriculture*.

Tobacco was introduced into Europe by the Spaniards and Portuguese, who acquired the habit of smoking from the natives of America; and it was brought to England by Raleigh and his co-adventurers, 1586. Its use afterwards increased rapidly. The planting of tobacco was even introduced into England; in which, notwithstanding several prohibitions, it was continued until the Restoration, when, for the purposes of revenue, the exclusive supply of the home market was secured to the American colonists; though its cultivation in Ireland was permitted until a recent period. Tobacco having been always the subject of an extensive smuggling, especially before 1825, the custom-house accounts of the trade cannot be implicitly relied on. In 1842, the quantity of unmanufactured tobacco imported into the United Kingdom amounted to 38,204,641 lbs.; of manufactured and snuff, 733,937 lbs.; total, 38,938,578 lbs.: of which about 19-20ths were brought from the United States, and the remainder chiefly from Cuba, Colombia, Hayti, and the East Indies. The total quantity entered for consumption in the same year was 22,378,062 lbs.; the surplus imported being re-exported chiefly to Germany, Holland, Belgium, Spain, Portugal, Italy, west coast of Africa, and Australia.

Dealers distinguish between *strip* and *leaf*, or *strip-leaf* and *hand-work*; the former being the technical name for that from which the stem of the leaf has been taken away, before the latter is packed, whereas hand-work is the leaf packed whole, stem and all. Upon the arrival of tobacco in Britain it is lodged in bonded warehouses, where every cask is opened, and the portion which from damage is considered to be not worth paying duty upon, removed and consumed. Afterwards, it is conveyed to the manufacturer, who communicates to it one of the three forms in which it is used—common tobacco, cigars, or snuff.

The Duty in Britain on foreign unmanufactured tobacco was in 1786 only 10d. per lb.; but in 1787 it was increased to 1s. 3d.; in 1796 to 1s. 7d.; and afterwards gradually to 4s. in 1815; which high rate was continued until 1825, when it was reduced to 3s.,—the existing rate. As the price of tobacco in bond varies from 2½d. to 6d. per lb., the duty is from 600 to 1440 per cent.: the average rate is about 900 per cent. The Irish duties were assimilated to those of Britain in 1813. The net revenue levied in the United Kingdom on the article is about £3,500,000; only two foreign commodities—sugar and tea—bringing in a larger sum.

The duty was collected both through the customs and excise until 1825, since which it has been levied wholly by the customs. A strict survey of the manufacturers was, however, maintained by the excise until 1840, when it was abolished (3 & 4 Vict. c. 18); but the smuggling and adulteration alleged to be practised, led in 1842 to a partial re-establishment of the excise surveillance by the 5 & 6 Vict. c. 93.

Tobacco is prohibited to be imported in vessels of less than 120 tons, or exported in those under 70 tons; and the places of import are limited to London and Liverpool (to which two nearly the whole is brought), and a few other principal ports. A charge of 2s. per hhd. is made on its being placed in the bonded warehouse, and the same when it is taken out; but no other rent is due for five years. On being re-shipped it is subject to an allowance of shrinkage from the seller to the buyer of 30 lbs. per hhd. on Virginia and Kentucky, and 15 lbs. per hhd. on Maryland, on the landing weights; the draff of the former 8 lbs., and the latter 4 lbs., with a tret on all sorts of 4 lbs. per 104 lbs. When taken out for home consumption the same allowances of draff and tret are made as for exportation, and the duty is charged on the net weight. [Customs Regulations.]

TOLU BALSAM, the concrete juice of the *Myroxybon toluiferum*, is of a brownish-yellow colour, transparent, with the taste and odour of the white balsam of Peru. It is imported from South America in earthenware jars or tin cases; but it is much adulterated.

TON, a British measure of weight, equal 20 cwts. or 2240 lbs. avoirdupois; in the measurement of a ship, it is reckoned at 40 cubic feet.

TONNAGE of a Ship, is properly an expression for its interior capacity by the number of tons of sea-water which it could contain; therefore, if the interior volume were found in cubic feet, on dividing that volume by 35 (the number of cubic feet of sea-water equal in weight to one ton), the quotient would be the tonnage required. In practice, however, it has been found convenient to adopt empirical rules for finding the tonnage of ships. Prior to 1836, the established method in this country was founded on very erroneous principles. By considering the breadth and depth nearly the same, the rule implied the square of the breadth; and hence increasing the breadth of a vessel increased her *nominal* tonnage for the payment of dues more than it increased her real capacity. Vessels, accordingly, came to be built narrow and deep; and thus not only less efficient but highly dangerous. But this pernicious practice was abolished, and an improved system introduced, by the act 5 & 6 Wm. IV. c. 56, of which the following is an abstract:—

Vessels not propelled by steam, previous to being registered, must be measured while the hold is clear, thus:—Divide the length of the upper-deck between the after part of the stem and the fore part of the stern-post into six equal parts. *Depths.*—At the foremost, the middle, and the aftermost of those points of division, measure in feet and decimal parts of a foot the depths from the under side of the upper-deck to the ceiling at the limber strake. In the case of a break in the upper-deck, the depths are to be measured from a line stretched in a continuation of the deck. *Breadths.*—Divide each of those three depths into five equal parts, and measure the inside breadths at one-fifth and at four-fifths from the upper-deck of the foremost and aftermost depths, and at two-fifths and four-fifths from the upper-deck of the midship depth. *Length.*—At half the midship depth measure the length of the vessel from the after-part of the stem to the fore-part of the stern-post; then to twice the midship depth add the foremost and the aftermost depths for the sum of the depths; add together the upper and lower breadths at the foremost division, three times the upper breadth, and the lower breadth at the midship division, and the upper and twice the lower breadth at the after division, for the sum of the breadths; then multiply the sum of the depths by the sum of the breadths, and this product by the length, and divide the final product by 3500, which will give the number of tons for register. If the vessel have a poop or half-deck, or a break in the upper-deck, measure the inside mean length, breadth, and height of such part thereof as may be included within the bulkhead,—multiply these three measurements together, and, dividing the product by 92·4, the quotient will be the number of tons to be added to the result as above found. In open vessels, the depths are to be measured from the upper edge of the upper strake.

In steam-vessels, the tonnage due to the cubical contents of the engine-room must be deducted; the contents being ascertained thus:—Measure the inside length of the engine-room in feet and decimal parts of a foot from the foremost to the aftermost bulkhead, then multiply the said length by the depth of the vessel at the midship division, and the product by the inside breadth at the same division, at two-fifths of the depth from the deck, taken as aforesaid, and divide the last product by 92·4, and the quotient will be the tonnage of the engine-room.

The length of the engine-room and the tonnage due to its cubical contents must be set forth in the registry; and any alteration on them will require a new registry.

Vessels whose tonnage is required when their cargoes are on board, must be measured thus:—Measure first the length on the upper-deck, between the after-part of the stem and the fore-part of the stern-post; secondly, the inside breadth on the under side of the upper-deck, at the middle point of the length; and, thirdly, the depth from the under side of the upper-deck down the pump-well to the skin; multiply these three dimensions together, and divide the product by 130: the quotient will be the amount of the registered tonnage.

The amount so ascertained must be carved on the main beam of each vessel.

TONTINE, a loan raised on life annuities, with the benefit of survivorship. Thus, an annuity at a certain rate of interest is granted to a number of subscribers, who are divided into classes according to their ages; and annually the whole fund of each class is shared among its survivors, till at last it falls to one, and on his death it reverts to the party who established the tontine. The term is derived from the name of the inventor, Lorenzo Tonti, a Neapolitan.

TOPAZ, an ornamental stone, in considerable estimation. It occurs massive, in rounded pieces, and crystallized in prisms. Sp. gr. 3·5. It is sometimes limpid and nearly transparent, or of various shades of yellow, green, blue, or red, and translucent. It becomes electric by heat, with polarity. Topaz occurs chiefly in Minas Novas in Brazil, and the Ural Mountains; but it is also found in the German tin mines, the Mourne Mountains in Ireland, and Cairngorm in Aberdeenshire.

TORTOISE-SHELL (Malay, *Sisik kurakura*), the scales of the tortoise; used for combs, snuffboxes, spectacles, as well as for inlaying and various other works. There are several kinds both of land and marine tortoises, but the shell of commerce is usually obtained from a marine species found within the tropics, called the caretta or hawksbill tortoise, the *Testudo imbricata* of Linnæus. Tortoise-shell abounds in the seas of the Indian Archipelago; and it is imported extensively from Singapore. An inferior kind is brought from the West Indies.

TOYS (Du. *Speelgoed.* Fr. *Jouets*, *Bimbelots.* Ger. *Spielzeug*, *Speilsachen.* It. *Trastulli*), children's playthings, baubles, and trifling ornaments of all sorts. These articles form, in this country, the subject of an immense commerce. Birmingham, denominated by Burke "the toyshop of Europe," is the chief seat of the manufacture of metallic ornaments, trinkets, and bijouterie; and an almost infinite variety of toys are made in London and other cities throughout the kingdom; besides which, considerable quantities are imported from Holland, Germany, France, India, and China.

TRADE. [Commerce.]

TRADE-WINDS, a name given to certain remarkable aerial currents, on account of their signal importance in commerce.

In those parts of the Atlantic and Pacific Oceans which are remote from the influence of the land, between the limits of about 28° or 30° N. and S. latitude, there is a constant easterly wind. On the north side of the equator it blows from between the north and the east, and on the south side from between the south and the east, inclining more to the north and south, according to the distance from the equator: these winds are denominated the N.E. and S.E. *trade-winds*; and are produced by a modification of the currents of cold air flowing from the poles to the equator, caused by the rotation of the earth on its axis. The direction and extent of the trade-winds vary with the season of the year; and in some parts of the world their course is entirely altered. The most remarkable of these modifications of the trade-winds are the Indian Monsoons.

TRAGACANTH, or GUM-DRAGON, a gum produced by a species of *Astragalus* growing in Persia and Turkey. It is more costly, and extremely different in many of its properties from gum-arabic. The finest kind occurs in twisted, vermicular, rounded or elongated pieces, almost transparent, whitish, brittle, inodorous, with a slightly bitter taste. It is also found in large tears, of a vermicular form, a reddish colour, and mixed with impurities. It is used in topical dyeing, and in pharmacy for making powders into troches.

TREACLE, the viscid brown syrup which drains from sugar when refining.

TRET, a deduction of 4 lbs. for every 104 lbs. from the weight of goods for dust, &c.

TRIPOLI, the most easterly of the Barbary States, consists chiefly of a line of coast, extending about 800 miles along the Mediterranean, from Cape Razatin to Port Bomba. Population, 660,000. It is nominally a dependency of the Porte.

For a few miles inland, the country is of exuberant fertility, but beyond this the interior consists either of sandy deserts, or of the barren mountainous districts of Gavian and Mesalata. The coast tract produces in luxuriance many articles peculiar to the finest tropical climates, and corn is raised in abundance. The date forms the staple of the interior and sandy districts.

Tripoli, the capital and chief port, is situated on a neck of land projecting a short distance into the sea, in lat. 32° 53′ N. long. 13° 11′ E. Pop. 25,000. Exports, wool, drugs, madder roots, barilla, hides, goat and sheep skins dressed, salt, trona, ostrich feathers, gold-dust, ivory, gum, dried fruits and dates, lotus-beans, cassol-venere, saffron, bullocks, sheep, and poultry. Imports, manufactured goods, colonials, timber, and naval stores. The principal intercourse is with the Levant, Malta, and Tunis.

TRIPOLI, an earthy substance used in polishing hard bodies.

TROY, a term applied to the English weight for the precious metals. [Measures.]

TRUCK SYSTEM, a name given to the practice of paying workmen in goods instead of money. Though attended with some advantages, it was found to be susceptible of very great abuses. It was accordingly prohibited under penalties by 1 & 2 Wm. IV. c. 32.

TRUFFLE, a delicate subterranean fungus (*Tuber cibarium*), esteemed as an article of diet. It is imported from France and Italy.

TUNIS, one of the Barbary States, lies betwixt Algiers on the W. and Tripoli on the E. Area, 72,000 sq. miles. Population, 2,000,000. The monarch, or *bey*, possesses absolute power, and is now independent of the Porte.

This state is composed chiefly of a large peninsula, stretching into the Mediterranean to within less than 100 miles of Sicily. The climate is fine, and the soil fertile, except when the usual rains are withheld. All the coast is capable of bearing cotton, sugar, and spices. Indigo and silk might also be procured with a little care. The mountains near the capital contain silver, copper, and lead, and near Porto Farina there is one of quicksilver; but the mines are not worked.

Tunis, the capital and chief port, is an irregularly built and dirty town, in lat. 36° 48′ N., long. 10° 16′ E. Pop. 120,000. The staple exports are olive-oil, wool, red caps, grain, hides, gold-dust, ivory, sponges, tunny fish, wax, and soap, the whole amounting annually to about £370,000. The imports are woollens, cottons, linens, with coffee, spices, sugar, metals, silk, wine, &c. The government monopolizes the trade in many articles; as tobacco, wax, wool, and provisions, which it farms out to individuals. The chief intercourse is with Marseilles. With Britain there is little trade, except through the medium of Gibraltar and Malta.

TUNNY, a large fish (*Thynnus vulgaris*) belonging to the mackerel tribe,—the object of important fisheries in the Mediterranean.

TURBOT, a flat fish (*Rhombus maximus*), weighing generally from 5 to 10 lbs., taken on nearly all the coasts of Britain, but principally off Scarborough. It is in season from May to Michaelmas.

TURKEY, or the OTTOMAN EMPIRE, embraces—1*st*, *European Turkey*, which, including the dependencies of Wallachia, Moldavia, and Servia, comprises, excepting Greece, almost the whole of the great easterly peninsula of S. Europe, extending from lat. 39° to 48½° N., and from long. 15½° to 29° E. Area, 210,000 sq. miles; population, 14,000,000. 2*d*, *Asiatic Turkey*, comprising Asia Minor, the adjacent islands, the greater part of Armenia and Kurdistan, with Syria and

Palestine, Mesopotamia, and a portion of Arabia. Area, 437,000 sq. miles; pop. 10,000,000. The empire likewise includes Egypt and other African districts; but these are now merely nominal dependencies. Government, despotic, but tempered by the laws of the Koran.

European Turkey may be considered a mountainous country, though it has some very extensive plains,—the principal being that comprising Wallachia, Moldavia, and Bulgaria; considerable portions of Thrace, Macedonia, and Thessaly are also level. The country generally is well watered by the Danube, Save, and other rivers. Asia Minor consists chiefly of an extensive table-land, traversed from W. to E. by mountain-ranges, which extend into Armenia and Kurdistan. Towards the S. the surface spreads out into extensive plains, naturally fertile, but at present desert and uninhabited, except the coast district of Syria, which contains the lofty chain of Lebanon.

The climate of European Turkey is colder and more changeable than that of the parts of Italy and Spain under the same latitudes; and that of Asiatic Turkey is almost equally variable. The relative temperature of the different divisions is best indicated by their vegetable products. In Croatia, Bosnia, and the adjoining provinces of European Turkey, the mountains are covered with oak and elm; S. of the Balkan, the country, besides forests of sycamore, carob, and plane trees, contains vineyards and orchards, but is destitute of the olive, which does not thrive N. of lat. 40°. The productions of Albania resemble those of the opposite coast of Italy; and in Thessaly—the garden of European Turkey—oil, wine, cotton, tobacco, figs, pomegranates, oranges, and lemons grow to perfection. The vegetation is similar in the more sheltered parts of Asia Minor. In Armenia and Kurdistan, the olive and orange ripen only in the warmer valleys. S. of Taurus we enter an entirely new region, where the date, banana, sugar-cane, and indigo, betoken a close approach to the products of tropical climates.

Every branch of industry is in a backward state in Turkey. In most parts power makes law; and there is no real security of property. The cultivators are congregated in villages, and agriculture is in a very rude condition. Still, so great is the fertility, that there is a surplus of corn for exportation. The grains chiefly cultivated are maize, wheat, rye, barley, oats, and buckwheat. Wine is grown in most of the European provinces; oil chiefly in the Asiatic; flax, hemp, saffron, cotton, tobacco, castor-oil, and madder are also reared; likewise silk, especially round Brusa, in Asia Minor. Sheep and goats furnish the principal animal food of the people.

Manufactures appear formerly to have attained greater excellence than was to be expected; but of late years they have been depressed by foreign competition, and the domestic weaving of cotton stuffs for family use is now almost the only branch of consequence. Copper, lead, iron, and other metals exist in various parts; but mining industry is little pursued.

Commerce is impeded by the want of roads; and almost all merchandise is conveyed throughout the country on the backs of camels and horses. In European Turkey, after Constantinople, Adrianople, Salonica, and Bucharest in Wallachia, are the principal trading cities; and, next to Smyrna, Trebisonde and Aleppo are the chief in Asia, being the seats of an extensive caravan trade with Persia, Bussora, Bagdad, and other places. The principal exports from Turkey are sheeps' wool, raw silk, goats' hair, cattle, horses, hides, skins, corn, cotton, tobacco, fruit, mastic and other gums, gall-nuts, valonia, honey, wax, saffron, madder, anise, linseed, turpentine, safflower, whetstones, carpets, leather; with Arabian, Persian, and Indian goods. The chief imports are cottons and cotton yarn, linens, woollens, and silks, tropical products and dye-stuffs, hardware, earthenware, paper, and furs.

The trade between England and Turkey was long monopolized by a chartered company, incorporated 1581. In 1753, the chief abuses of the Turkey Company were removed; and in 1825 it finally surrendered its privileges. The declared value of British produce and manufactures exported from the United Kingdom to Turkey, on an average of the five years to 1841, was £1,292,531; about three-fourths of which consisted of cotton manufactures and yarn; the remainder chiefly of refined sugar, iron and steel, woollens, machinery, coal, plate and jewellery, hardware, earthenware, tinwares, haberdashery and linens: nearly one-half of these goods are forwarded to Persia, mostly by way of Constantinople and Trebisonde. These are exclusive of British products shipped to Syria and Palestine, amounting to nearly £250,000 yearly, principally cottons. Besides these, coffee, spices, and other foreign and colonial articles are shipped from England to Turkey. The principal exports from Turkey to Britain are raisins, figs, valonia, raw silk, opium, madder, sheep's wool, skins, cotton wool, and sometimes wheat.

Trade is mostly in the hands of English, French, Italians, Greeks, Armenians, and Jews. The policy of the Porte in respect to importations has always been liberal, and the provision monopolies and restrictions which formerly existed, have it is believed been abolished. Her commercial system is in fact the best feature in the government of Turkey.

PORTS.—*Constantinople*, the capital, in lat. 41° 0′ N., long. 28° 59′ E., is advantageously situate at the junction of the Bosporus with the Sea of Marmora. The interior presents a strange combination of magnificence and meanness. Pop. 600,000. The town occupies a triangular peninsula, forming, with the suburbs of Galata and Pera, the magnificent port of the Golden Horn. This port is safe and capacious; but the approach to it in summer is retarded by the unremitted blowing of the N. wind from the Black Sea down the Bosporus, Sea of Marmora, and the Dardanelles. The trade of Constantinople is very considerable, it being an entrepôt for a great portion of European and Asiatic Turkey, as well as Persia.

The chief other ports are—in European Turkey, Galatz in Moldavia on the Danube, and Salonica in Macedonia; in Asiatic Turkey, Smyrna on the W. coast of Asia Minor, Trebisonde on the Black Sea, and Beyrout in Syria.

MEASURES, WEIGHTS, MONEY, &c.

Measures and Weights.—The pik or ell is of two kinds; the greater pik, called *halebi* or *archim*, used in the measurement of silks and woollens, = 27·90 Imp. inches; the lesser pik, termed *endasè*, used in the measurement of cottons and carpets, = 27·06 Imp. inches; but in trade the pik is reckoned at 27 Imp. inches = ¾ Imp. yard. The *berri*, or Turkish mile, = 1826 Imp. yards.

The almude, liquid measure, = 1⅛ Imp. gallon nearly, and 100 almudes = 115·10 Imp. gallons; the almude of oil weighs 8 okes.

The fortin, corn measure, of 4 killows, = 3·84 Imp. bushels; and 100 killows = 12 Imp. quarters nearly.

The oke of 4 chequees, or 400 drams, = 19800 troy grains = 2 lbs. 13 oz. 4⅛ drams avoirdupois; the cantar or quintal of 44 okes, or 100 rottoli, = 124·46 lbs. avoirdupois.

Gold, silver, and precious stones, are weighed by the chequee, = 4950 troy grains: the chequee is divided into 100 drams, each of 16 karas, or 64 grains; the dram = 49½ troy grains; and 1½ dram = 1 metical = 74¼ troy grains = 2¾ drams avoirdupois nearly. The fineness of gold is expressed by dividing the unit of reference into 24 carats, each of 4 grains: the fineness of silver by dividing it into 100 carats, each of 4 grains.

The preceding are the Constantinople weights; but in Smyrna, 100 killows = 17¾ Imp. quarters; 2 killows of Smyrna = 3 killows of Constantinople nearly. The cantar or quintal is 7½ batmans, 45 okes, 100 rottoli, or 18000 drams, = 127·29 lbs. avoird. In other respects as above.

The batman of Persian silk is 6 okes; the quintal of cotton yarn, 45 okes; the taffee of Brussa silk, 610 drams; the chequee of goat-wool, 800 drams; the chequee of opium, 250 drams.

Money.—Accounts are stated in piastres (*grusch*) of 40 paras, each para consisting of 2½ good or 3 current aspers. The rate of exchange is very variable, on account of the continued debasement of the coin. In 1810, £1 was worth only 12 piastres; but in 1839 it was equivalent to 104, and in 1842 to nearly 120 piastres.

The common or silver purse (*keser*) is 500 piastres; the gold purse (*kise*) is 30,000 piastres; the *juks* is 2 common purses, or 1000 piastres.

No regular system of coinage exists at present in Turkey. And bills and prices are generally reckoned by European merchants according to the rates borne by foreign coins, particularly Spanish and German dollars.

Bills on London are commonly drawn at 61 days' sight; on other places, 31 days' sight. No uniform custom prevails as to days of grace.

A Treaty between Britain and Turkey in 1838 engages the Porte "to abolish all monopolies of agricultural produce, or of any other articles whatsoever, as well as all permits from the local governors, either for the purchase of any article, or its removal from one place to another when purchased." It allows British merchants to purchase, export, or re-sell all kinds of merchandise; and other powers are entitled to establish their trade on the same basis. The duties it fixes are 3 per cent. *ad valorem* on all goods imported or exported, and they are to be subject to a septennial revision.

TURMERIC, the dried roots or bulbs of a tropical plant (*Curcuma longa*), are about the size of a pigeon's egg—oblong, tough, externally grayish, internally of a deep yellow colour, with an aromatic smell and a bitterish acrid taste. Our supplies are brought from Bengal, Java, and China: of these the Chinese is the best. Turmeric, after being imported, is reduced to a powder, which is used in dyeing and in medicine; also as a seasoning, being an ingredient in curry.

TURNSOLE, a blue dye, obtained from a lichen found in the Canaries.

TURPENTINE (Fr. *Térébenthine*. Ger. *Turpentin*. It. *Trementina*), a name for several resinous juices of trees, chiefly of the pine tribe. These juices agree in most of their properties, being originally fluid and transparent, of a strong and rather pleasant odour, and a pungent taste; inflammable and soluble in oils, alcohol, and ether, but not in water. When distilled, they yield an essential oil, called oil or spirit of turpentine, and a solid matter, called *rosin*, is left in the still. The principal varieties are—1. Common turpentine, derived from the *Pinus sylvestris*, and largely imported from the United States. 2. Venice turpentine, from the *P. larix*, or larch tree. 3. Chio turpentine, from the *Pistacia terebinthus*, and imported from Chio, Cyprus, and the Greek Archipelago. Turpentine is largely employed in the arts, especially in painting and varnishing; also in medicine and surgery.

TURTLE, a name given to the marine tortoise, some species of which, especially the green turtle, found on the coasts of almost all the islands and continents of the torrid zone, are highly prized as food. They abound particularly in the Cayman Isles, in the West Indies, from whence they are imported.

TUSCANY, an Italian grand-duchy, lying on the N.W., between the Apennines and the Mediterranean, separating the Papal States and Lucca. Area, including Elba, &c., 8381 sq. miles. Population in 1836, 1,436,780. Capital, Florence, an inland city, pop. 97,548. Government, an absolute monarchy.

A considerable portion of the territory is occupied with branches of the Apennines; while from Leghorn to the S. frontier, the maritime district, called the *Maremma*, once full of flourishing cities, is now a pestilential desert. The finest part is the broad and fertile vale of the Arno, extending from Florence to Pisa. About one-third of Tuscany is planted with vines and olives, or cultivated as arable land, and nearly two-thirds consist of forests or plantations of chesnuts, and pasture-ground. The corn raised is insufficient for the consumption. The chief productions for export are oil, silk, fruit, lamb and kid skins, potash, timber, cork, marble and alabaster, iron from Elba, borax, alum, and anchovies fished on the coast; a little wine; with straw-plat, woollen caps, coral articles, and some other manufactures. Trade is mostly concentrated at

Leghorn or *Livorno*, the chief commercial emporium of Italy, situated in lat. 43° 32′ N., long. 10° 17′ E., 14 miles from Pisa, and 45 from Florence, to which a railway is in progress. Pop. 75,000, including numerous English. The town is neat; and the harbour is tolerably spacious, but not sufficiently deep for large vessels, which lie in the roads, where there is good anchorage. There are three lazarettos, and extensive warehouses in porto franco. The chief imports are corn from the Black Sea, French woollens, English cottons, hardware, salt-fish, and colonial articles, especially sugar from Havana and Brazil, coffee, and spices. The exports, besides the native products already noticed, include the re-shipment of Black Sea wheat, and many of the other imports.

The transit-trade of Leghorn, particularly with the Levant and Black Sea, is less considerable than formerly; but the very low charges of the port, and the facilities afforded by its warehouses and lazarettos, within which last ships may be unladen without being detained to perform quarantine, enable it still to preserve a very important share of this trade. In 1838, 3582 vessels entered the port, including 195 British, in burden 29,307 tons. The yearly exports are estimated at from £1,500,000 to £2,000,000.

MEASURES, WEIGHTS, MONEY, &c.

Measures and Weights.—The braccio of 20 soldi = 22·979 Imp. inches, and 100 braccia = 63·83 Imp. yards; the passetto is 2 braccia, and the canna 5. The Tuscan mile = 2833 braccia.

The sacato, land-measure, of 10 stagoli, = 5928 Imp. square yards; the quadrato = 4074 Imp. square yards.

The baril, wine measure, of 20 fiasci, = 10·03 Imp. galls.; the oil baril of 16 fiasci, = 7·36 Imp. galls.: the soma is 2 barili, and the cogna 10.

The stajo, corn-measure, of 2 mine, = 2·676 Imp. pecks; and 100 staja = 66$\frac{9}{10}$ Imp. bushels: the sacca of 3 staja = 2 Imp. bushels; and the moggio of 24 staja = 2 Imp. quarters nearly.

The Tuscan pound of 12 ounces, 96 drams, 288 denari, or 6912 grani, = 5240 troy grains; and the quintal of 100 lbs. = 74·86 lbs. avoird.

Money.—Accounts are stated in lire, divided into 100 centimes, or into 20 soldi each of 12 denari. The lira, valued in silver, is equivalent to 7·86d. or 7⅞d. sterling nearly; and £T.30, 53 centimes = £1 sterling.

In 1836 a joint-stock bank was established at Leghorn, which issues notes varying in amount from £T.200 to £T.2000.

Principal coins: the ruspone, worth about £1.8s. 5½d. sterling; the zecchin, 9s. 5¾d.; the francescone, 4s. 4⅞d., or 10 pauls; the paul, 5¼d.

Bills from Britain are usually drawn at 3 months' date.

TYPE, a piece of metal, generally an alloy of lead with regulus of antimony, on one end of which, called the *face*, is cast the figure of a letter or other character used in printing. There are a great variety of sizes. The quantity of each usually required is called a *fount*, and is purchased by the pound weight. A fount comprehends a certain proportion of capital, small capital, Roman and Italic letters, with points, numerals, &c. Letter-founding was invented in Germany in the 15th century. In the reign of Anne most of our type was imported from Holland; but after 1720, the improvements of William Caslon of London rendered the English types superior to any in Europe. The art is still extensively pursued in the metropolis; also in Edinburgh, where it has attained the greatest perfection.

U.

ULLAGE, in Gauging, what a cask wants of being full.

UMBRELLA (Fr. *Parapluie*), a well-known article, employed as a covering against rain; a smaller kind—the *parasol*—being also used by ladies as a protection from the sun. Both are of Asiatic origin, where they are used entirely for the latter purpose; and were introduced into this country by way of Italy in the early part of last century. In Europe, such coverings are used by almost all classes; but in the East their use is confined to the highest, whose rank also they sometimes denote. They are extensively made in Birmingham, London, and other cities in this country. The finer kinds are covered with silk; and the commoner with a peculiar kind of cotton cloth, largely manufactured in Perth and Carlisle.

UNITED KINGDOM OF GREAT BRITAIN AND IRELAND, the nucleus of the wealth and power of the British empire, consists of two large islands, situated in the N. Atlantic Ocean, off the W. shores of Continental Europe, between lat. 50° and 59° N., and long. 2° E. and 11° W., and numerous smaller islands adjoining thereto. Area, 121,853 sq. miles. Population in 1841,—England and Wales, 15,911,725; Scotland, 2,620,610; Ireland, 8,179,359; total, 26,711,694. Capital, London, in lat. 51° 30′ N., long. 0° 5′ W. Pop. 1,870,727. Government, a constitutional monarchy; with a parliament consisting of a House of Lords made up (excluding minors) of 417 hereditary peers and 30 bishops, and a House of Commons of 658 representatives, chosen by about 996,000 electors qualified by holding a certain amount of property.

All the departments of British industry and production having received prominent attention in the different articles of the present work, we deem it unnecessary in this place to do more than give a summary of the most recent commercial and financial tables issued by the government.

IMPORTS and EXPORTS of the UNITED KINGDOM.

Years Ending Jan. 5.	Official Value of Imports.	Official Value of Exports.			Declared Value of British Produce and Manufactures.
		British Produce and Manufactures.	Foreign and Colonial Merchandise.	Total Exports.	
1841*	£67,432,964	£102,705,372	£13,774,306	£116,479,678	£51,406,430
1842	64,377,962	102,180,517	14,723,151	116,903,668	51,634,623
1843	65,204,729	100,260,101	13,584,158	113,844,259	47,381,023

* For preceding years see the article COMMERCE.

Quantities of the Principal Articles of Foreign and Colonial Merchandise entered for Home Consumption.

	Years to January 5,	
	1841.	1842.
Bark ....*cwt.*	640,714	505,893
Butter............*cwt.*	249,272	251,255
Cheese ....*cwt.*	220,678	248,335
Coffee............*lbs.*	28,723,735	28,420,980
Corn: Wheat ...*qrs.*	2,024,848	2,300,888
Other kinds....*qrs.*	1,442,378	649,484
Flour.........*cwt.*	1,317,815	1,214,220
Cotton wool:		
United States..*lbs.*	453,016,218	353,353,283
East Indies....*lbs.*	51,931,138	59,667,420
Brazil ....*lbs.*	13,952,644	14,095,967
Other places...*lbs.*	12,297,659	13,180,411
Dyes: Indigo....*lbs.*	3,011,990	2,809,195
Lac...............*lbs.*	649,943	765,894
Flax & Hemp...*cwt.*	1,998,583	1,998,898
Hides............*cwt.*	304,502	456,222
Molasses.........*cwt.*	423,126	402,422
Oil, olive ....*gals.*	1,989,466	1,339,646
Train &Sperm...*tuns*	24,503	23,717
Pepper...........*lbs.*	2,742,637	2,750,798
Quicksilver......*lbs.*	331,649	303,479
Rice..............*cwt.*	216,097	245,887
Rice in husk....*bush.*	353,844	374,135
Saltpetre ....*cwt.*	325,492	368,175
Seeds: Clover...*cwt.*	141,304	81,209
Flax & lint ..*bush.*	3,292,964	2,764,250
Silk, Raw, &c. ..*lbs.*	4,885,475	5,046,870
Spirits: Rum ..*gals.*	2,510,668	2,278,861
Brandy.......*gals.*	1,108,773	1,165,137
Sugar..............*cwt.*	3,604,450	4,065,714
Tallow............*cwt.*	1,118,397	1,243,112
Tea.................*lbs.*	32,262,905	36,396,078
Timber: foreign *loads*	167,624	131,468
Colonial.....*loads*	639,038	614,057
Battens, deals, staves....*hund.*	190,266	177,032
Tobacco ....*lbs.*	23,096,281	22,308,385
Wine............*gals.*	6,840,537	6,460,018
Wool, Sheep's....*lbs.*	49,809,502	53,020,067

Declared Value of Principal Articles of British and Irish Produce and Manufactures Exported.

	Years to January 5,	
	1841.	1842.
Apparel..........£	632,844	582,848
Arms, ammunition..	332,101	343,776
Beef, pork, &c......	288,719	128,091
Beer, ale............	422,222	360,429
Books................	147,331	141,866
Brass and copper....	1,450,464	1,523,744
Butter, cheese......	266,334	223,863
Cabinet wares.......	78,124	76,548
Coals, culm..........	576,520	675,288
Cordage..............	163,521	130,415
Cotton manufactures	17,567,310	16,232,510
Cotton yarn	7,101,308	7,266,968
Earthenware.........	573,184	600,760
Fish	262,492	197,989
Glass	417,177	421,936
Haberdashery	575,843	635,127
Hardwares...........	1,349,137	1,623,961
Hats...................	143,485	125,402
Horses................	85,446	149,688
Iron, steel............	2,524,859	2,877,278
Lead and shot	237,312	242,334
Leather, saddlery ...	417,074	432,775
Linen manufactures.	3,306,088	3,347,555
Linen yarn...........	822,876	972,466
Machinery	593,064	551,361
Oil, linseed, &c	105,937	114,619
Painters' colours....	206,356	185,982
Plate, jewellery	204,427	214,126
Salt....................	213,479	175,615
Silk manufactures...	792,648	788,894
Soap, candles	450,640	342,690
Stationery...........	282,403	274,544
Sugar, refined	440,893	548,336
Tin wares, &c.......	499,603	477,195
Wool..................	356,021	584,828
Woollen manufactures	5,327,853	5,748,673
Woollen yarn........	452,957	552,148
Other articles........	1,738,378	1,762,154
Total...£	51,406,430	51,634,623

Declared Value of the Produce and Manufactures of the United Kingdom Exported to different Countries in each of the Years 1840 and 1841.

Countries.	1840.	1841.
Russia...............£	1,602,742	1,607,175
Sweden...............	119,425	197,813
Norway...............	78,016	117,938
Denmark	201,462	191,481
Prussia	219,345	363,821
Germany	5,408,499	5,654,033
Holland	3,416,190	3,610,877
Belgium..............	880,286	1,066,040
France................	2,378,149	2,902,002
Portugal Proper	1,110,244	1,036,212
.... Azores........	44,743	38,280
Madeira............	33,157	24,008
Spain..................	404,252	413,849
.... Canaries	45,872	49,738
Gibraltar	1,111,176	1,053,367
Italy & Italian Islands	2,660,338	2,578,697
Malta.................	166,545	223,734
Ionian Islands	89,204	119,523
Turkey and Continental Greece	1,138,559	1,220,261
Morea and Greek Islands............	25,827	34,684
Syria	223,033	427,093
Egypt.................	79,063	238,486
Barbary...............	63,904	44,126
W. Coast of Africa..	492,128	410,798
Cape of Good Hope.	417,091	384,574
Mauritius ....£	325,812	340,140
E. I. Co.'s Territories and Ceylon........	6,023,192	5,595,000
China	524,198	862,570
Sumatra, Java......	349,521	285,514
Philippines..........	325,463	84,419
Australia, Van Diemen's Land........	2,004,385	1,969,351
New Zealand, &c....	47,240	67,275
British America	2,847,913	2,947,061
.... West Indies....	3,574,970	2,504,004
Hayti	251,979	169,142
Other Foreign W. I. Islands............	863,520	895,441
United States.......	5,283,020	7,098,642
Texas	....	6,767
Mexico	465,330	434,901
Guatemala...........	2,373	21,265
Colombia............	359,743	158,972
Brazil.................	2,625,853	2,556,554
La Plata States	614,047	969,362
Chili	1,334,870	438,089
Peru...................	799,991	536,046
Channel Isles & Man	367,214	350,407
Other Places.........	16,546	14,491
Total,..£	51,406,430	51,634,623

PUBLIC REVENUE in 1839, 1840, and 1841, and EXPENDITURE in 1841.

REVENUE.	Years ended January 5,		
	1840.	1841.	1842.
CUSTOMS & EXCISE.	£	£	£
Spirits Foreign	1,341,821	1,290,581	1,361,453
Rum	1,273,630	1,155,613	1,063,087
British	5,442,478	5,201,664	5,178,175
Malt	4,845,949	4,983,602	5,263,363
Hops	280,079	341,440	69,055
Wine	1,849,710	1,791,646	1,721,281
Sugar, molasses	4,827,019	4,650,017	5,307,675
Tea	3,658,800	3,472,864	3,973,668
Coffee	779,115	921,552	887,723
Tobacco, snuff	3,495,687	3,588,192	3,550,825
Butter, cheese	318,297	375,256	397,236
Currants, raisins	323,882	339,880	410,827
Corn	1,098,778	1,156,640	568,341
Cotton and wool	559,679	785,491	664,576
Silk	262,304	240,628	257,735
Paper	629,817	583,982	586,219
Soap	784,168	808,201	815,864
Candles, tallow	182,000	186,283	205,839
Glass	718,348	738,553	682,192
Bricks, tiles, slates	463,426	523,380	443,018
Timber	1,603,194	1,730,551	1,500,315
Auctions	298,404	316,246	311,788
Excise Licences	1,028,685	1,054,115	1,036,582
Post Horses	228,251	216,636	199,864
Sundries	1,617,985	1,674,395	1,661,521
Total..	37,911,506	38,127,408	38,118,222
STAMPS.			
Deeds, &c.	1,699,283	1,710,533	1,665,297
Probates, Legacies	2,017,686	2,098,078	2,132,473
Marine Insurance	292,978	299,398	284,496
Fire Insurance	923,005	944,321	964,146
Bills, Notes	781,629	773,114	743,312
Newspapers	238,394	244,416	245,866
Advertisements	125,026	131,590	131,605
Stage-coaches	497,216	438,047	460,733
Receipts	173,047	175,070	174,747
Sundries	469,001	473,256	473,685
Total..	7,217,265	7,287,823	7,276,360
TAXES.			
Land Taxes	1,174,100	1,181,283	1,214,431
Windows	1,298,622	1,404,642	1,664,053
Servants	201,482	216,823	215,844
Horses	384,286	416,170	464,592
Carriages	447,467	481,499	414,676
Dogs	159,852	170,951	172,190
Add^{l}. 10 per cent.			311,357
Miscellaneous	266,880	280,919	258,210
Totals..	3,932,689	4,152,287	4,715,353
POST-OFFICE	2,390,764	1,342,604	1,495,540
CROWN LANDS	357,815	482,422	438,298
Other Receipts	248,310	300,966	271,660
In all..	52,058,349	51,693,510	52,315,433

EXPENDITURE In the Year ended January 5, 1842.	
COLLECTION OF REVENUE. £	2,162,056
Preventive Service	561,990
Total..	2,724,046
PUBLIC DEBT.	
Interest of Permanent Debt	24,333,352
Terminable Annuities	4,076,776
Management	135,669
Interest on Exchequer Bills	896,465
Total	29,442,262
CIVIL GOVERNMENT.	
Royal Household	371,800
Branches of Royal Family	318,000
Lord-Lieut. of Ireland's Estab.	32,465
Houses of Parliament	122,717
Civil Departments	498,551
Miscellaneous Annuities	319,299
Pensions' Civil List	4,022
Total..	1,666,854
JUSTICE.	
Courts of Justice	533,761
Police & Criminal Prosecutions	571,805
Correction	497,060
Total..	1,602,626
DIPLOMATIC.	
Ministers' Salaries and Pensions	185,770
Consuls' Salaries and Pensions	128,890
Disbursements, Outfit, &c.	36,671
Total..	351,331
FORCES.	
Army Effective (92,630*)	3,971,425
Non-effective (86,260)	2,446,996
Navy Effective (40,273)	5,103,358
Non-effective (22,447)	1,385,716
Ordnance. Effective (9531)	1,655,393
Non-effective	159,739
Total..	14,722,627
Chinese Expedition	400,000
Insurrection in Canada	117,153
Public Works	356,424
Public Warehouses, &c.	121,326
Colonial Charges	239,122
Remun. for Services, Losses, &c.	192,749
Special and Temporary Objects	119,531
Charitable Institutions	159,738
Education, Science, and Art	276,716
Permanent Charges	462,887
Abolition of Slavery	122,425
Post-office	931,372
Payments from Crown Lands	213,315
Other Charges	242,814
In all..	54,465,318

CUSTOMS DUTY Collected at the Principal Ports in 1841.

England.	£	England.	£	Scotland.	£	Ireland.	£
London	11,757,262	Chester	77,593	Leith	604,098	Dublin	977,718
Liverpool	4,140,593	Southampton	72,262	Glasgow	526,100	Belfast	372,792
Bristol	1,046,800	Yarmouth	69,726	Greenock	423,535	Cork	263,364
Hull	712,124	Sunderland	67,205	Port-Glasgow	100,827	Waterford	168,359
Newcastle	410,076	Lynn	64,389	Aberdeen	78,126	Limerick	170,552
Gloucester	123,688	Portsmouth	62,227	Dundee	48,138	Londonderry	108,507
Plymouth	126,727	Goole	61,599	Montrose	31,713	Newry	42,010
Whitehaven	86,299	Truro	44,129	Grangemouth	20,692	Sligo	36,627
Stockton	85,724	Rochester	40,713	Perth	12,381	Galway	27,768

* Exclusive of Queen's troops paid by the East India Company.

UNITED STATES OF N. AMERICA, a confederacy of democratic republics which claims the portion of that continent extending from the Atlantic on the E. to the Pacific on the W., and from British America on the N. to Mexico, Texas, and the Gulf of Mexico on the S.; but the settled part is nearly confined to the region lying between lat. 29° and 47° N., and long. 67° and 95° W., which is divided into 26 states, 3 "territories" (or half-formed states), and a federal district. It has an area of about 2,000,000 square miles, and a population (1840) of 17,063,353, including 2,487,355 negro slaves in the S. states; but excluding about 200,000 Indian aborigines. Capital, Washington, pop. 23,364. The federal government comprehends a president, the executive head, appointed for four years by electoral colleges, and a congress composed of two legislative chambers,—a senate made up of two members chosen by each of the state legislatures for six years, and a house of 242 representatives, elected for two years by the people.

The Physical Geography of this immense country presents various distinct features. Two principal chains of mountains intersect it from N. to S.; on the W. the Rocky Mountains, a prolongation of the Mexican Cordillera, 8000 feet in mean height, which run nearly parallel to the Pacific coast at the distance of several hundred miles; and on the E. the Alleghany Mountains, about 2500 feet in mean height, which run nearly parallel to the Atlantic coast, at a distance varying from 70 to 300 miles. These two chains divide the entire territory into three regions,—the Western or Pacific region, watered by the Columbia river; the Eastern or Atlantic region, watered by the Hudson, Delaware, and other streams; and the Middle region, comprising the great and fertile valley of the Mississippi, and watered by that river and its mighty tributaries the Ohio and the Missouri.

The Atlantic region, the first settled, is the most populous and improved portion, but not the most favoured as to soil and climate. From the Alleghanies to the Mississippi the country is much more fertile, particularly the basin of the Ohio—a rich and beautiful tract, the garden of the United States. These two districts, embracing the whole country E. of the Mississippi, were originally almost a continuous forest, the greater part of which still remains. Beyond that river is the prairie tract, occupying the central part of N. America, W. to nearly the Rocky chain; where commences a barren sandy district, several hundred miles in length by 300 in breadth. The Pacific slope is said to be densely wooded, but it is only partially explored.

The Climate on the N. resembles that of Canada,—extremely cold in winter, and warm in summer, with a rapid transition from the one season to the other; and along the whole Atlantic coast it may be generally described as much colder than in the same parallels in Europe, the difference being equivalent to about 10 degrees of latitude. This difference lessens as we proceed westwards; and on the shores of the Pacific the climate resembles that of the W. of Europe on the same parallel. In the southern states the summers are hot and unhealthy, especially in July, August, and September; but the remainder of the year is commonly mild and pleasant.

The Productions of the Soil differ according to climate and situation. Timber, though still common in the Atlantic states, has been mostly cleared from localities whence it can be readily carried away. Agriculture is as yet but imperfect, the state of the country still rendering it more profitable to cultivate a large surface rudely, than a small one laboriously. The principal objects of cultivation, ranged in their order of importance, are in the different divisions as follow:—In the northern or New England states (Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut), Indian corn, grass, rye, oats, flax, wheat, buckwheat, barley, and hemp; in the middle and western states, wheat, Indian corn, tobacco, grass, oats, buckwheat, flax, barley, potatoes, spelts, rye; and in the southern states, cotton, wheat, tobacco, Indian corn, rice, barley, and hemp.

The crop of the chief articles in 1840, and the states ranking highest in production, were as follow:—Indian corn, 377,531,875 bushels (Tennessee, Kentucky, Virginia); wheat, 84,823,272 bushels (Ohio, Pennsylvania, New York, Virginia); oats, 123,071,341 bushels (New York, Pennsylvania, Ohio, Virginia); rye, 18,645,567 bushels (Pennsylvania); barley, 4,161,504 bushels (New York); potatoes, 108,298,060 bushels (New York, Maine); hemp and flax, 95,252 tons (Virginia); rice, 80,841,422 lbs. (S. Carolina); tobacco, 219,163,319 lbs. (Virginia, Kentucky); cotton, 790,479,275 lbs. (Mississippi, Georgia, Louisiana, Alabama); sugar, 115,110,809 lbs. (Louisiana); and silk cocoons, 61,522 lbs. (Connecticut).

The live-stock in 1840 consisted of 4,335,669 horses and mules; 14,971,586 neat cattle (New York, Ohio); 26,301,293 swine (Tennessee, Kentucky, Ohio); and 19,311,374 sheep (New York, Ohio, Vermont), yielding 35,802,114 lbs. wool.

Mining is prosecuted to some extent. Coal is worked in Pennsylvania, Virginia, and Ohio, where there is an immense formation extending into Indiana and Illinois. Iron is generally diffused; and mines are worked in Pennsylvania and other states. Lead is raised in Wisconsin, Illinois, and Missouri; and of late years gold has been collected in N. Carolina, Georgia, and in Virginia. Other minerals exist; but only a trifling quantity is raised. Salt is produced chiefly in New York and Virginia.

In 1840, 27,603,191 bushels of bituminous coal, and 863,489 tons (each of 28 bush.) anthracite, were produced; 286,903 tons cast, and 197,233 tons bar iron; 31,239,453 lbs. lead; $529,605 value of gold; and 6,179,174 bushels domestic salt.

Manufactures were established after the separation from the mother-country; and having been since fostered by tariff protection, they have risen to some importance in the northern states, especially Massachusetts. Cotton and woollen goods are largely made at Lowell in that state; the coarser kinds of hardware and machinery at Pittsburg in Pennsylvania and other places; and a variety of other goods,—as leather articles, linen, linen-yarn, cordage, glass, paper, soap, and candles, at different places. Distillation and brewing are conducted on a great scale, especially in New York, Pennsylvania, and Ohio; and a little wine is made in N. Carolina and other states.

In 1840 the value of woollens made was $20,696,999; of cottons, $46,350,453; of flaxen goods, $322,205; of silks, $119,814; of mixed manufactures, $6,545,503; of hats, caps, bonnets, &c., $10,180,847; of leather articles, $33,134,403; of glass, $2,890,293; of paper, $5,641,495; of cordage, $4,078,306; and the quantity of spirits distilled, 41,402,627 gallons!

The Internal Trade, which is of great activity and extent, is facilitated by the magnificent navigation of the Hudson, Ohio, Mississippi, and other rivers, and of the great lakes which separate the States from Canada; and also by the numerous canals and railways by which these and the Atlantic ports and populous districts are connected. These public works, partly formed by joint-stock companies, and partly state undertakings, want the finish and durability of those of Britain, but some are of great extent,—as the Erie Canal, 363 miles in length, joining Lake Ontario and the Hudson, and the railway connecting the Ohio with the Delaware. In 1838, the canals in operation afforded 3026 miles of artificial inland navigation; and the total mileage of railways chartered in 1840 was 9378, of which 3430 were open, and traversed by 475 locomotives. The roads, however, excepting those in New England, and a national one 700 miles in length, from Baltimore to St Louis on the Mississippi, are very indifferent; in many parts being mere forest tracks.

The External Commerce and navigation of the United States exceeds that of any other nation of the world,—Great Britain alone excepted. Her staple export is cotton wool, the shipment of which in 1841 was estimated in the public accounts at $54,330,341, being in value more than one-half of the whole domestic exports of the Union. The chief other articles of that year were tobacco, $12,576,703; flour, $7,759,646; rice, $2,010,107; other grain, $6,967,709; pork, bacon, beef, &c., $4,360,180; lumber, naval stores, and ashes, $6,264,852; produce of fisheries, $2,846,851; cotton manufactures, $3,122,546; other manufactures, $6,203,617: the whole making, with unenumerated articles, and $2,746,486 of coin, $106,382,722. The cotton is sent chiefly to Britain, France, and Germany; tobacco principally to Britain and Holland; the flour and provisions partly to Europe, but chiefly to Brazil and the West Indies, which are also the great marts for lumber.

The imports are made up of cottons, woollens, linens, hardware, earthenware, and other manufactures from Britain; silks and wines from France and Spain; tea from China; sugar and coffee from Cuba and Brazil; linens, woollens, and hosiery from Germany; salt from England and Portugal; with spices, dye-stuffs, and numerous other articles from all parts. In 1841 the whole amounted to $127,946,177, whereof $14,724,300 were in foreign, and $113,221,877 in American shipping.

The mercantile marine of the Union amounted in 1840 to 2,180,764 tons, owned chiefly in the northern states.

Progress of the EXPORTS and IMPORTS for a Series of Years.

	1835.	1836.	1837.	1838.	1839.	1840.	1841.
EXPORTS.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.
Domestic..	101,189,082	106,916,680	95,564,414	96,033,821	103,533,891	113,895,634	106,382,722
Foreign....	20,504,495	21,746,360	21.854,962	12,452,795	17,494,525	18,190,312	15,469,081
	121,693,577	128,663,040	117,419,376	108,486,616	121,028,416	132,085,946	121,851,803
IMPORTS.....	149,895,742	189,980,035	140,989,217	113,717,404	169,092,132	107,141,519	127,946.177

The following TABLE shows the POPULATION of the several STATES and TERRITORIES according to the Census of 1840, and their IMPORTS and EXPORTS in 1841.

	Pop.	Imports.	Exports.		Pop.	Imports.	Exports.
Atlantic States.		Dollars.	Dollars.	*Western States.*		Dollars	Dollars.
Maine.........	501,793	700,961	1,091,565	Ohio..........	1,519,467	11,318	793,114
NewHampshire	284,574	73,701	10,348	Michigan......	212,267	137,800	88,529
Vermont......	291,948	246,739	277,987	Indiana........	685,866	....	....
Massachusetts..	737,699	20,318,003	11,487,343	Illinois........	476,183	....	....
Rhode Island...	108,830	339,592	278,465	Missouri........	383,702	33,875	....
Connecticut....	309,978	295,989	599,348	Kentucky......	779,828	....	....
New York.....	2,428,921	75,713,426	33,139,833	Tennessee......	829,210	7,523	....
Pennsylvania..	1,724,033	10,346,698	5,152,501	Arkansas......	97,574	....	....
New Jersey....	373,306	2,315	19,166	Alabama.......	590,756	530,819	10,981,271
Delaware......	78,085	3,276	38,585	Mississippi.....	375,651	....	....
Maryland......	470,019	6,101,313	4,947,166	Louisiana......	352,411	10,256,350	34,387,483
Columbia, *F. D.*	43,712	77,263	769,331	*Territories.*			
Virginia........	1,239,797	377,237	5,630,286	Florida........	54,477	145,181	36,629
N. Carolina....	753,419	220,360	383,056	Wisconsin......	30,945	....	....
S. Carolina....	594,398	1,557,431	8,043,284	Iowa..........	43,112	....	....
Georgia........	691,392	449,007	3.696,513		17063,353	127 946 177	121 851 803

VALUE of IMPORTS from and EXPORTS to Foreign Countries in 1841.

	Imports.	Exports.			Imports.	Exports.	
		Domestic Produce.	Foreign Produce.			Domestic Produce.	Foreign Produce.
	Dollars.	Dollars.	Dollars.		Dollars.	Dollars.	Dollars.
U. Kingdom..	46,662,815	46.155,735	3,386,539	Italy, Sicily....	1,739,293	1,205,881	192,499
Gibraltar....	21,079	1,020,931	98,989	Rest of Europe	1,959,965	2,285,558	149,983
British India	1,236,641	532,334	430,867	Mexico.........	3,284,957	886,513	1,150,107
Brit. W. Indies	1,105,594	3,714,879	92,962	Venezuela......	2,012,004	532,419	230,083
Brit. America	1,968,187	6,292,290	364,273	Hayti..........	1,809,684	1,093,634	61,923
Other colonies	105,322	142,977	133,627	Sp. W. Indies..	14,127,047	5,828,856	660,158
				Other W. Indies	1,884,912	1,952,170	170,807
	51,099,638	57,859,146	4,507,256	Brazil.........	6,302,653	2,941,991	575,282
France.......	23,993,812	18,410,367	3,356,388	Argen. Republic	1,612,513	509,007	152,939
Russia.......	2,817,448	146,118	879,611	Chili, Peru....	1,755,356	846,410	256,578
Holland......	1,638,022	2,237,444	277,478	China..........	3,985,388	715,322	485,494
Belgium.....	374,833	1,673,726	150,156	Other countries	3,787,992	2,761,504	1,734,459
Hanse Towns	2,449,964	4,110,655	450,061				
Spain........	1,310,696	386,001	27,819	Total..	127,946,177	106,382,722	15,469,081

The fisheries of the United States are of great importance. The cod-fishery is prosecuted with activity by the New Englanders, who are likewise extensively engaged in the northern and southern whale-fisheries. In 1840, a capital of $16,429,620, and 36,584 men, were employed in the fisheries; the whole producing 773,947 quintals of smoked and dried fish, 472,359 barrels pickled fish, 4,764,708 gallons spermaceti, and 7,536,778 gallons whale and other fish oil, besides $1,153,234 in value of whalebone and other articles.

The commerce and navigation of the United States rose into importance during the wars consequent on the French revolution, when they acquired a great proportion of the general and carrying trade of Europe; and in the interval from 1791 to 1807, their exports increased from $19,000,000 to $108,000,000, and their imports from $52,000,000 to $138,500,000. But this prosperity was checked by the lawless violence which reigned after the Berlin and Milan decrees of Napoleon on the one hand, and the British orders in council on the other, concerning the respective rights of the neutral and the belligerent. And even after the return of peace, the high duties imposed with the view of protecting the manufactures of the northern states, rendered the progress of trade by no means commensurate with the general advance of the Union in wealth and population. The declared value of the British and Irish produce and manufactures annually exported to the United States was, on an average of the three years 1805-6-7, £11,749,137; of the five years 1816-20, £6,948,609; of the ten years 1821-30, £6,009,770; and of the ten years 1831-40, £7,834,381, having in the speculative years 1835 and 1836 been £10,568,455 and £12,425,605, respectively. The trade with other countries maintained nearly the same proportions.

The protective policy of the United States was begun in 1789. It was extended in 1816, particularly as to woollens and cottons, new manufactures of which had sprung up in the northern states during the short war with Britain. And it was still farther extended by the celebrated tariff of 1828. This measure, however, having roused the indignation of the southern states, especially South Carolina, and nearly led to a disruption of the Union, was modified in 1832; and Mr Clay's Tariff Bill, passed March 2, 1833, further provided for the gradual reduction of all duties exceeding 20 per cent. to that rate by June 30, 1842. The good effects anticipated from Mr Clay's bill have been frustrated by a new tariff passed in August 1842, which re-imposes extravagant rates on manufactured goods; but the rising discontent of the southern states renders it probable that this tariff will be only of short duration.

The objections of the southern states to the tariff of 1842 (as to that of 1828) arises, as is well known, from their being wholly agricultural, and the *buyers*, not the producers, of manufactured goods. In this way they not unnaturally exclaim against a law, the tendency of which is both to force them to purchase the comparatively dear goods of the northern states, and at the same time to deprive them of the most profitable market in which to make their sales of cotton, tobacco, rice, and other raw products: for there can be no doubt, that to the same degree in which the tariff prevents them from buying foreign manufactures, it goes to exclude their agricultural produce from foreign countries.

THE PRINCIPAL PORTS, stated in their order from N. to S. along the Atlantic, are the following:—

Boston, in Massachusetts, 210 miles N.E. of New York, lies on a peninsula in a bay in lat. 42° 21′ N., long. 71° 5′ W. Pop. 93,383. The harbour is deep, capacious, and safe, with extensive wharfs; and its entrance is fortified. The trade consists chiefly in exporting manufactured goods, beef, pork, fish, and whale-oil, in exchange for flour, rice and other grain, cotton, tobacco, stores, coals, &c., from the more southern states; but it has also an extensive foreign trade.

New York, the commercial capital of the United States, lies in lat. 40° 43′ N., long. 74° 10′ W., on Manhattan Island, at the mouth of the Hudson, opposite Long Island and Staten Island, through the channel between which, called the Narrows, the port is usually approached from the Atlantic. Pop. 312,710. The inner bay forms a magnificent harbour, 8 miles in length by 4 or 5 in breadth; and the largest ships may lie close to the quays. By means of the Hudson and the extensive system of canals and railways with which New York is connected, it is the port not only for the surrounding country, but in a great measure also for Upper Canada, Ohio, Michigan, and Indiana; while, by means of the Erie canal and lake, and the Ohio and Wabash canals, goods may be conveyed to the emporiums on the Mississippi, even to New Orleans, and conversely. It has also an extensive transit trade with the S. states. Its imports and exports thus embrace every article that enters into the trade of the Union. The value of the merchandise annually loaded and unloaded is estimated at nearly $200,000,000; and the coasting arrivals exceed 5000. In 1839, 2118 vessels (546,856 tons) arrived from foreign ports; and the imports amounted to $99,296,495, and the exports to $34,928,872. The great excess of imports arises from the produce of the Western States being mostly sent down the Mississippi to New Orleans, while their foreign supplies are chiefly derived through New York.

Philadelphia lies 80 miles S.W. of New York, in Pennsylvania, between the Delaware and Schuylkill, 6 miles above their confluence, in lat. 39° 57′ N., long. 75° 11′ W. Pop. 228,691. The quays on the Delaware are accessible to the largest merchantmen. This port is chiefly distinguished for its coasting trade; largely exporting flour, provisions, and manufactures to New York, Baltimore, &c.; though its foreign commerce is also pretty extensive, the imports annually amounting to from $12,000,000 to $15,000,000.

In New York and Philadelphia, the *spring* and the *fall*, when the country buyers arrive or give their orders, are distinguished as the trade seasons. The spring trade begins about the middle or end of January, and terminates about the first of May: in Philadelphia, however, it commences for the western trade about one month earlier. The fall trade begins both in New York and in Philadelphia on the 1st August, and closes towards the commencement of November. Goods intended for either season should arrive at least one week before it commences.

Baltimore, in Maryland, 100 miles S.W. Philadelphia, on Potapsco Bay, 14 miles above its entrance into the Chesapeake, in lat 39° 17′ N., long. 76° 38′ W. Pop. 102,313. It is favourably situated; and is one of the greatest emporiums in the world for flour and tobacco. The chief other exports are hemp, flax, corn, timber, and iron. Imports, manufactures, &c.

Charleston, in S. Carolina, in lat. 32° 46′ N., long. 79° 57′ W., at the confluence of the Couper and Ashley rivers, 6 miles from the ocean. Pop. 29,261. Exports chiefly cotton and rice; with naval stores, hams, bacon, &c. Imports, corn, flour, fish, and coarse manufactures from the N. and middle states, with a variety of foreign goods, mostly at second-hand from New York.

Savannah, in Georgia, in lat. 32° 2′ N., long. 81° 3′ W., on the Savannah river, 12 miles from its mouth. Pop. 11,214. It lies 80 miles S. W. Charleston, and its trade is very similar. The total annual exports approach $15,000,000.

Mobile, in Alabama, 115 miles E. New Orleans, in lat. 30° 40′ N., long. 88° 11′ W., at the mouth of the Mobile river, in the Gulf of Mexico. Exports, chiefly cotton. Imports, trifling.

New Orleans, in Louisiana, the great and flourishing emporium of the western and southern states, lies in lat. 29° 58′ N., long. 90° 9′ W., on the Mississippi, 105 miles from its mouth, in the Gulf of Mexico. Pop. 102,191. It is built on a swampy unhealthy plain. The river is very deep at the town, and is navigable for the largest vessels several hundred miles inland; but there is a bar at its main entrance at Balize, with only from 12 to 14 feet water at tide. Exports, cotton, flour, corn, meal, bacon, pork, tobacco, shingles, stores, lead, sugar, &c., the whole amounting in 1839 to $30,995,936, exceeding in value the American produce shipped at New York; but the imports are comparatively small, amounting in 1839 to only $12,864,942.

MEASURES, MONEY, BANKS, &c.

Measures and Weights same as in Britain, except the measures of capacity, which continue to be those used in England prior to the introduction of the imperial system. Commodities formerly sold by the hundredweight, however, are now, with few exceptions, sold by the 100 lbs., termed in some of the states a *quintal*.

The barrel of flour contains 5 Winchester bushels of wheat, and weighs 196 lbs. net. The barrel of Indian corn contains 3¼th Winchester bushels, each bushel weighing about 57 lbs. The hogshead of Indian meal contains 800 lbs.; the barrel of pickled beef or pork, 200 lbs.

Money.—The integer of account is the dollar ($), which is divided into 100 cents.

Gold coins; the eagle (of 10 dollars) weighing 258 troy grains, 9-10ths fine, or 232⅕ grains pure, and 25⅘ grains alloy; also the half-eagle and quarter-eagle, in the same proportion.

Silver coins; the dollar (of 100 cents), weighing 412½ troy grains, 9-10ths fine, or 371¼ grains pure, and 41¼ grains alloy; also the half-dollar, quarter-dollar, dime or $\frac{1}{10}$ dollar, and half-dime, in the same proportion.

Copper coins; the cent weighing 208 troy grains, and the half-cent.

The expenses of the mint being defrayed by the government, coin is exchanged for bullion, deducting ½ per cent. for the advance for the time required for coining. The remedy of the mint is 1 part in 144.

The value of the eagle, of full weight, is 41s. 1·16d., equal £2, 1s. 1⅙d. sterling nearly; and of the dollar, 50·17d., equal 4s. 2⅙d. sterling nearly. But the value of the dollar of account, which since 1834 [EAGLE] has been estimated in gold at $\frac{1}{10}$th of the eagle, or rather ⅕th of the half-eagle (few eagles being coined), is only 49·32d., equal nearly 4s. 1⅓d. sterling.

The par of exchange with Britain, deduced from the gold coins, is thus 49⅓ pence per dollar, equal $4·86⅔ cents per £1 sterling. But in practice the rate is commonly expressed (as more particularly explained under EXCHANGE), by a per centage upon an assumed par of 4s. 6d. per dollar: the true par, stated in this form, is 9½ per cent. premium; or £109, 10s., valuing the dollar at 4s. 6d., = £100 in British sterling money. When the premium is above 9½ per cent. therefore, the exchange is in favour of Britain; when below 9½ per cent., against it.

Bills on Europe are commonly drawn at 60 days' sight. The days of grace are 3. The foreign exchange is regulated chiefly by the state of the bill market of New York.

The following foreign gold coins are allowed currency by *weight*: those of Britain, 915½-1000ths in fineness, at 94$\frac{8}{10}$ cents per dwt.; and those of France, 899-1000ths in fineness, at 92$\frac{9}{10}$ cents per dwt. And the following foreign silver coins are allowed currency by *tale*: Spanish pillar dollars, and the dollars of Mexico, Peru, and Bolivia, 897-1000ths in fineness, and 415 grains in weight, at 100 cents each; and French 5 franc pieces, 900-1000ths in fineness, and 384 grains in weight, at 93 cents each. (*Act of Congress*, March 3, 1843).

Banks of issue have been established in all parts of the Union. They are partly state concerns, and partly joint-stock associations chartered with partners liable only for the amount of their shares, or for some fixed multiple thereof. Many being without any solid foundation, and most, if not all of them, conducting their operations loosely, they became involved in the speculative undertakings which prevailed in 1835 and 1836, and in May 1837 the whole suspended specie payments. In 1838 cash payments were resumed by such as continued solvent; but the greater number again suspended in October 1839, when the great bank of the United States, in Pennsylvania, originally with a capital of $35,000,000, gave way; since which, though the New York banks have continued to fulfil their engagements, the banking system generally has fallen into utter lawlessness and confusion.

On January 1, 1839, the number of banks was 508, and of branches, 131; their aggregate capital, $259,642,610; and circulation, $100,670,640.

Finances.—The revenue of the federal government is derived almost wholly from the produce of the sales of public lands and the customs duties; the former fluctuating usually from about $2,000,000 to $6,000,000; the latter from $15,000,000 to $20,000,000.

The public debt amounted in 1794 to $76,096,468; in 1812 it was reduced to $45,154,189; but in 1816, after the conclusion of the war, it had increased to $123,016,325. In 1834 it was entirely redeemed, and in the following years a surplus accrued, which on January 1, 1837, amounted to $43,000,000, which, after reserving $5,000,000, was to be distributed among the states by quarterly instalments; but the last instalment was indefinitely deferred, owing to the commercial and banking embarrassments which occurred afterwards.

Most of the individual states, and some of the cities, have contracted debt, principally for canals, railways, public buildings or institutions; and the amount of these debts at the close of 1840, was about $250,000,000, a great part of which is due in Britain. A large portion of this money has been injudiciously expended; but this does not afford the shadow of a pretext for the "repudiation" of their debts by Michigan, Mississippi, Louisiana, and other states,—a course so disgraceful, that besides bringing a flood of dishonour upon those states, it has to a certain extent affected the value of all American securities in the markets of Europe.

URUGUAY, a small South American republic, lying between Brazil and the river Plata. Area, 80,000 sq. miles; population 70,000, chiefly Spanish Americans, Indians, and mixed races.

A considerable portion of the country consists of table-land, yielding nothing but pasture for large herds of wild cattle. Towards the west the table-land is intersected by numerous valleys, which, as well as those adjoining the Plata, contain many fertile tracts, where the grains and fruits of Southern Europe are cultivated with success. The eastern coast district is low and poor, being mostly covered with sand and intersected by lakes. It is not known whether the precious metals are found, but at San Carlos a rich copper mine is worked.

Montevideo, the metropolis, and only port of consideration, is a strongly fortified town, situated on a peninsula on the northern shore of the river Plata, 120 miles E. of Buenos Ayres, in lat. 34° 54′ S., long. 56° 13′ E. Pop. 12,000. The harbour is the best on the Plata; but is exposed to the violent west winds called *pamperos*. It is of a circular shape, 4 miles in diameter, with a narrow entrance, and is deep enough for large ships. The trade resembles that of Buenos Ayres. In 1836, the value of merchandise exported was £631,392, and imported £659,530.

Measures and Weights same as Spain. *Money.*—Accounts are kept in dollars, worth, according to a recent quotation, about 44d. or 3s. 8d. sterling.

USANCE, the customary or usual time for which bills are drawn.

USQUEBAUGH, an Irish compound of spirits, raisins, cinnamon, cloves, &c.

USURY, is the taking, on previous agreement, in England and Scotland of more than £5, in Ireland more than £6, for the forbearance of £100 during a year, and so in proportion. Of late years the usury laws have been relaxed in favour of bills not having more than 12 months to run, and simple loans above £10, not on real security, as explained under INTEREST.

V.

VALONIA, the acorn of a species of oak (*Quercus ægilops*) produced in the Morea and Asia Minor. It is used in tanning; the astringent principle is mostly confined to the acorn-cup. Valonia is of a bright drab colour, becoming black, however, when exposed to damp, which injures it. About 160,000 cwts. are annually imported into the United Kingdom.

VAN DIEMEN'S LAND, an insular appendage to the S.E. part of the Australian continent, subject to Britain. Area, 27,000 sq. miles. Population in 1838, 45,758, including 18,133 convicts.

The island is intersected from north to south by a chain of mountains about 3500 feet in height; and the remainder is composed of alternate hill and dale, a great part clear, well watered by rivers, and mostly fit for cultivation or pasturage. The climate is cooler than that of New South Wales, and the country has not the same extremes of barrenness and fertility. Wheat, barley, oats, and potatoes are produced of superior quality; and the sheep supply fine wool, though it is said scarcely equal to that of the continent. Blackwood and pine are the chief timber trees.

Van Diemen's Land was discovered by Tasman in 1642. In 1803, a convict establishment was founded by the British. After 1813, it was frequented by voluntary emigrants; and between 1824 and 1838, the grants of land were not less then 1,128,000 acres. In 1839 the sales amounted to 42,386 acres, at the average of 10s. 1½d., and in 1840 to 88,296 acres, at 11s. 4d., exclusive of town lots and military grants. In 1838, 108,000 acres were under crop, yielding 970,000 bushels corn, including 550,000 of wheat; and the live-stock consisted of 1,214,000 sheep, 75,000 cattle, 9650 horses, and 2400 goats. In the same year there belonged to the colony 101 vessels, burden 8382 tons; of these, nineteen, burden 2000 tons, were employed in the whale-fishing.

The principal exports are, wool (in 1841, 3,597,531 lbs.) whale-oil, bark, &c., amounting in 1840 to £867,000; and the imports, comprising all sorts of British manufactures, colonial products, spirits, wines, farming implements, &c., amounted in the same year to £968,356, including £737,250 from Britain; the shipping inwards and outwards amounting each to about 80,000 tons.

Hobart-Town, the capital, on the S. side, possesses a splendid harbour on the Derwent river, 20 miles from its mouth, in lat. 42° 54′ S., long. 147° 21′ E.; pop. in 1838, 14,382. *Launceston*, 40 miles up the Tamar river, is the principal settlement on the N. side.

Measures and Weights same as Britain. *Currency*, British coins and local bank-notes and cheques. *Public revenue* in 1838, £138,591; expenditure, £133,681.

VANILLA, the succulent fruit or pod of a parasitical plant (*Vanilla aromatica*) found in Mexico. It is of a yellow or darkish-brown colour, corrugated, about eight inches long, containing in its cavity, besides numerous minute shining black seeds, a substance which is black, oily, and balsamic. It is an aromatic, employed in confectionary, the preparation of liqueurs, and in flavouring chocolate.

VEDRO, the principal Russian measure for liquids, = 2·71 Imp. gallons.

VELLUM, a fine white smooth kind of parchment made of calf-skin.

VELTE, a French measure for brandy, reckoned in Cognac at 1·61 Imp. gallon; in Bourdeaux at 1·58 do.; and in Nantes at 1·24 Imp. gallon.

VELVET (Fr. *Velours*. Ger. *Sammet*. It. *Velluto*), a beautiful silk fabric, of a compound texture; having, in addition to the warp and shoot of plain silk, a soft shag or *pile* on the outside, occasioned by the insertion of short pieces of silk thread doubled under the shoot; the other side being a strong close tissue. Its richness depends upon the relative number of the pile threads; and manufacturers accordingly designate different qualities as velvet of two, four, or six threads, according to the number. Velvet is now also made of cotton; a strong kind of which, called *Velveteen*, is used for men's apparel.

VENEZUELA, one of the three republics of COLOMBIA, occupies the N.E. corner of S. America, between New Granada and British Guiana, having Brazil on the S. Area, 404,000 sq. miles. Pop. 905,000, including 250,000 whites of Spanish origin. Capital, Caraccas; pop. 25,000. Constitution, a federal republic.

Venezuela has been only partially explored. The N. part is mountainous, containing on the N.W. a branch of the Andes, but the remainder is generally level, particularly the course of the Orinoco, a magnificent river which intersects the country from W. to E., sometimes overflowing considerable districts. The S. part mainly consists of *llanos*, boundless plains similar to the pampas of La Plata, affording pasturage to innumerable herds of cattle. Culture and colonization are mostly confined to the coast territory, especially the vales of Aragua; where are reared coffee, cacao, tobacco, indigo, and cotton, which, with jerked beef, hides, mules, drugs, and dye-woods, form the leading exports. The imports chiefly consist of cottons and linens, with woollens, silks, flour, pork, and wine; and the principal commercial relations are with the United States, Britain, Denmark, Germany, Spain, France, and Holland. In 1839, the exports amounted to £895,198, and the imports to £717,091.

La Guayra, the port of Caraccas, and chief trading city, lies on the Caribbean Sea, in lat. 10° 36′ N. long. 66° 56′ W. Pop. 4000. The port is a mere roadstead; and the town is gloomy, hot, and unhealthy. In 1839, 26,337 tons of foreign shipping arrived, with cargoes valued at £570,318; and the exports amounted to £388,795. *Maracaybo*, on the strait connecting the great lake of that name with the sea, and *Angostura*, 240 miles up the Orinoco, are the chief other ports.

Measures and Weights same as Spain. *Money*, Colombian dollars of 8 reals: usual exchange, $6 = £1. *Revenue* in 1840, $2,245,259; expenditure, $1,933,750.

VERDIGRIS (Fr. *Vert-de-gris*. Ger. *Grünspan*), the subacetate of copper. When pure, it occurs in blueish acicular crystals; but commonly it is in large masses, from having been packed when moist in leather bags. Its purity may be tested by diluted sulphuric acid, in which it entirely dissolves, leaving the impurities, if any, behind. It is employed as a pigment, in hatmaking, dyeing black, &c.

VERDITER, a blue pigment, is a carbonate of copper, generally made by decomposing solution of sulphate of copper, with the addition of chalk.

VERJUICE, the expressed juice of unripe grapes, or of crab-apples.

VERMICELLI, a thready paste of flour and water, similar to MACCARONI.

VERMILION, a beautiful scarlet powder, the red sulphuret of MERCURY.

VINEGAR (Fr. *Vinaigre*. Ger. *Essig*. It. *Aceto*. Por. and Sp. *Vinagre*), is an impure ACETIC ACID, of which four varieties are known in commerce, namely, wine, malt, sugar, and wood vinegar. The best is that prepared in France from wine. In this country, beer or malt vinegar was the kind chiefly used before the present improved method of producing it from pyroligneous acid. This acid, sometimes called crude vinegar, is obtained by the destructive distillation of wood, and is now manufactured on a large scale. It is at first contaminated with tar, but after being refined and diluted with water, it is applicable to all the purposes for which common vinegar is used. Vinegar is apt, on exposure to the air, to become turbid and ropy, and at last vapid: it should therefore be kept in bottles completely filled and well-corked. Good French vinegar will keep in perfection many years, if the bottle be not frequently opened.

The manufacture and sale of vinegar are regulated by the act 58 Geo. III. c. 65. An excise duty of 2d. per gallon is levied upon the manufacture; and at present about 3,000,000 gallons are annually brought to charge. Nearly 9000 gallons of foreign vinegar are likewise imported.

VIOLIN. [MUSICAL INSTRUMENTS.]

VITRIOL, OR COPPERAS, a salt formed by the union of sulphuric acid with oxides of iron, copper, and zinc; the first forming the sulphate of iron, called *green vitriol*; the second, sulphate of copper, or *blue vitriol*; and the third, sulphate of zinc, or *white vitriol*. Sometimes the name of *red vitriol* is given to the sulphate of cobalt. Vitriol, when pure, occurs in beautiful crystals. It is extensively used in dyeing, ink-making, the manufacture of colours, and in medicine.

W.

WAINSCOT, a name applied to the oak imported in logs from N. Europe.

WALNUT, a large European tree (*Juglans regia*), yielding a nut the kernel of which is prized both for the table and for the oil which may be expressed from it. The timber of the tree was much employed in furniture-making before the introduction of mahogany, and it is still extensively used by the turner.

WANGHEES, a kind of canes imported from Canton.

WAREHOUSING OR BONDING SYSTEM, a system under which certain warehouses are appointed, under the charge of officers of the customs, in which goods may be deposited without being chargeable with duty until they are cleared for consumption. This system affords the most liberal convenience to the merchant, and a general facility to the trade of a country. The tax on a commodity is paid just when it is wanted, and when it is therefore least inconvenient to pay it.

Suppose, for example, that a merchant imports goods, and is required to pay a duty upon them immediately, and before he has found a market for them; he must either pay the tax and hold the goods, in which case the consumer will have to repay not only the tax but the interest on it; or he must sell the goods, and if he parts with them at a loss or inconvenience, trade is injured, and the general wealth and consequent productiveness of taxation proportionally diminished. Besides, the necessity of having to pay duties immediately on importation is a bar to the entrepôt and carrying trade of a country. Notwithstanding the obvious advantages of the warehousing system, however, it is only partially known in foreign countries, and in our own dates no farther back than 1803 (43 Geo. III. c. 132), previous to which the duties on all goods imported had either to be paid at the moment of their importation, or a *bond* was required, with security for their future payment. Since 1803 the system has undergone several improvements, the whole of which are embraced in the existing warehousing act passed in 1833.

Abridgment of the Warehousing Act, 3 & 4 Wm. IV. c. 57, with the Alterations of later Acts, viz. 4 & 5 Wm. IV. c. 89, and 5 & 6 Vict. c. 47, and c. 56, &c.

§ 1. Consolidation of former acts.

§ 2. The Commissioners of the Treasury are to appoint ports for the purposes of the act; and the commissioners of customs, subject to their directions, are to appoint in what places therein, and in what manner, goods may be warehoused.

§ 3. Whenever a warehouse is approved of, it must be so stated in the order of appointment.

§ 4. Appoints warehouses and bonds previous to the act to continue.

§ 5. The commissioners of customs are to provide tobacco warehouses at the legal ports.

§ 6. The treasury and commissioners of customs may revoke any former warrant or order, or make alterations or additions.

§ 7. Orders as to warehouses of special security, must be published in the Gazette.

§ 8. Before any goods are entered in any warehouse, the proprietor or occupier thereof, if he be willing, is to give general security for the payment of the full duties on all goods warehoused, or for the due exportation thereof; and if he be not willing, the different importers must give security in respect of their particular goods.

§ 9. If any warehoused goods be the property of the occupier, and be *bonâ fide* sold by him, on a written agreement signed by the parties, or a written contract of sale made, executed, and delivered by a broker or other person legally authorized for the parties, and the price so stipulated is actually paid or secured by the purchaser, every such sale is valid, although the goods remain in the warehouse; provided that a transfer, according to the sale, be entered in a book to be kept by the officer in charge, who must enter such transfers, upon application of the owners, and produce the book upon demand.

§ 10. Goods to be stowed in warehouse so as to afford easy access; and if taken out without due entry, the occupier is liable for the duties.

§ 11. Warehoused goods, fraudulently concealed or removed, are forfeited; and any person gaining access to the goods, except in the presence of the proper officer, forfeits £500.

§ 12. Within one month after any tobacco has been warehoused, and upon the entry and landing of any other goods, the proper officer is to take a particular account thereof, and mark "Prohibited" on goods prohibited for home use; and no alteration can be made on the packages, except in the cases after mentioned.

§ 13. All goods entered must be carried to the warehouse under the care of the proper officer.

[By 5 & 6 Vict. c. 47, § 52, any person fraudulently removing goods entered to be warehoused, forfeits treble their value, or £100.]

§ 14. Goods warehoused must be cleared for exportation or home use within 3 years, and all surplus stores of ships within 1 year from the day of the first entry (unless further time given by Treasury); and if any goods be not so cleared, the commissioners of customs may cause them to be sold, the produce to be applied to the payment of charges, and the overplus, if any, paid to the proprietor. When sold, such goods are held subject to all the conditions to which they were subject previous to sale, except that a further time of 3 months from the sale be allowed to the purchaser for clearing. If not so cleared, they are forfeited.

§ 15. If any goods entered to be warehoused, or to be delivered, be lost by accident, commissioners of customs may remit the duties.

§ 16. No goods warehoused can be removed, except upon due entry for exportation, or for home use, except goods to be shipped as stores, and which may be shipped without entry or payment of duty for any ship of the burden of 70 tons at least, bound upon a voyage to foreign parts, the probable duration of which out and home will not be less than 40 days: Provided such stores be borne on the victualling bill, and shipped as the commissioners may appoint.

§ 17. Rum of the British plantations may be shipped as stores without entry or payment of duty, and any surplus stores may be delivered to be reshipped for the same ship, or for the same master in another ship, without entry or payment of duty, if duly borne upon the victualling bills. If the ship for which surplus stores have been warehoused, be broken up or sold, the stores may be so delivered for the use of any other ship belonging to the same owners, or may be entered for payment of duty, and delivered for their private use, or that of the master.

§ 18. Upon the entry of such goods for home use, the person entering them must deliver a bill of the entry and duplicates, as in the case of goods entered to be landed, as far as the rules are applicable, and at the same time must pay the full duties, according to the quantity first taken of the respective packages at the time of the first entry and landing, without abatement, except as by this act otherwise provided; and if the entry be for exportation or for removal to any other warehouse, and any of the packages be deficient, a like entry inwards must be passed in respect of the quantities so deficient, and the full duties be paid on the amount before delivery or removal, except as by this act is otherwise provided; and if any goods so deficient be such as are charged according to value, it is to be estimated at the price for which the like goods of the best quality have been lately sold.

§ 19. The duties upon tobacco, sugar, and spirits, when taken out for home use, are to be charged upon the quantities actually delivered; except that if sugar be not in a warehouse of special security, no greater abatement on account of deficiency is to be made than shall be after the rate of 3 per cent. for the first 3 months, and 1 per cent. for every subsequent month during which the sugar is warehoused; and also except, that if spirits (being any other than rum of the British plantations) be not in a warehouse of special security, no greater abatements for deficiency is to be made than as follow:—

For every 100 gallons, hydrometer proof, viz.:
For any time not exceeding 6 months, 1 gal.; for any time exceeding 6 months, and not exceeding 12 months, 2 gals.; exceeding 12 months, and not exceeding 18 months, 3 gals.; exceeding 18 months, and not exceeding 2 years, 4 gals.; exceeding 2 years, 5 gals.

No abatement is made for deficiency of spirits by leakage or accident, and not by natural evaporation, except as otherwise specially provided. [By 4 & 5 Wm. IV. c. 89, § 20, the commissioners may remit duties on the whole, or any portion of wines, spirits, and other fluids unavoidably lost in warehouses; and the following goods, in warehouses of special security, are charged by their measure or weight, as actually delivered, viz.: wine, currants, raisins, figs, hams, cheese, and mahogany.] [*Vide* also CORN.]

§ 20. If after any goods have been duly entered and landed to be warehoused, the importer further enters them for home use or for exportation as from the warehouse, they are considered as warehoused, although not actually deposited.

§§ 21, 22, 23, 24. Any goods which have been warehoused may be removed by sea or inland carriage to any other warehousing port.

§ 25. Goods so rewarehoused are in the same situation as when first warehoused, and the time which they are allowed to remain rewarehoused is reckoned from the day when they are first entered to be warehoused.

§ 26. If upon their arrival at the port of destination, the parties are desirous forthwith to export the goods, or to pay duty thereon for home use, without actually lodging them, the officers, after all the formalities have been duly performed (except the actual labour of lodging them), may consider them as virtually rewarehoused, and the account taken for the rewarehousing may serve as the account for delivering them, as if from the warehouse, either for shipment or for payment of duties.

§ 27. Goods may be removed from one warehouse to another with official permission.

§ 28. Goods so removed are subject to the same conditions as when originally warehoused.

§ 29. When particular security has been given by the importer of warehoused goods in respect of the same, and they are disposed of, so that the original bonder is no longer interested in them, the officers may admit fresh security by the new proprietor, and cancel the original bond.

§ 30. If the person removing any goods from one port to another, continue to be interested in them, after they have been duly rewarehoused in some warehouse, in respect of which security is required, and not held under general security, the bond in respect of the rewarehousing continues in force, until fresh bond be given by some new proprietor.

§ 31. It is lawful in the warehouse to sort, and repack goods, and to make lawful alterations necessary for their preservation, or in order to the disposal of them, provided they be repacked in the packages in which the same, or some part of the same parcel, were imported, or in packages of entire quantity equal thereto, or in such other packages as the commissioners of customs may permit (not being less, if the goods be to be exported, or to be removed to another warehouse, than may be required by law for importation); and to draw off wine or rum of the British plantations into quart or pint bottles, for the purpose only of being exported; and to draw off rum into casks containing not less than 20 gallons each, for the purpose only of being disposed of as stores for ships; and to draw off any other spirits into quart bottles, under such regulations as the commissioners of customs may direct, for the purpose only of being exported; and to draw off and mix with wine any brandy secured in the same warehouse, not exceeding the proportion of 10 gallons of brandy to 100 gallons of wine; and to fill up any casks of wine or spirits from any other casks of the same, respectively secured in the same warehouse; and to take such moderate samples of goods as may be allowed, without entry and payment of duty, except as the same may eventually become payable, as on a deficiency of the original quantity. In a warehouse of special security, it is lawful to rack off any wine from the lees, and to mix any wines of the same sort, erasing from the casks all import brands.

§ 32. But no alteration is to be made on goods or packages, nor wine, rum, brandy, or spirits to be bottled, drawn off, mixed, or filled up, nor samples to be taken, except after notices given, and under the official regulations.

§ 33. To provide for the case of surplus quantities, which on repacking are not sufficient to fill whole packages, and for waste, the duties having been levied with regard to the state in which the goods are imported, it is provided that after goods have been repacked, the commissioners of the customs may cause or permit refuse, damaged, or surplus goods not contained in the packages to be destroyed; and if the goods be for home use, the duties must be immediately paid upon any part of such surplus as may remain, which is delivered for home use accordingly; and if they be such as may not be so delivered, the surplus is to be disposed of for exportation, as the commissioners may direct; and thereupon the quantity contained in each package must be ascertained and marked upon the same, and the deficiency ascertained, and the proportion which such deficiency may bear to the quantity in each package is to be marked on the same, and added to such quantity, and the total is to be deemed to be the imported contents of such package, except as otherwise provided by the act. But the commissioners may accept the abandonment, for the duties, of any quantity of tobacco or coffee, or pepper or cocoa, or lees of wine, and of any whole packages of other goods, and cause or permit the same to be destroyed, and deduct the quantity from the total quantity of the same importation, in computing the amount of the deficiency.

§ 34. No foreign casks, bottles, &c., except any in which some goods have been imported and warehoused. are to be used in repacking, unless the full duties have been paid thereon.

§ 35. The commissioners of customs may permit any stuffs or fabrics of silk, linen, cotton, or wool, or of any mixture of them, with any other material, to be taken out of warehouse to be cleaned, refreshed, dyed, stained, or calendered, or to be bleached or printed, without payment of duty, under security that they be returned within the time appointed; and they may, under like security, permit rice, the produce of places within the limits of the E. I. Co.'s charter, to be delivered out to be cleaned, with such allowance for waste as may seem reasonable. [By 5 & 6 Vict. c. 47, § 51, this provision is extended, and the commissioners are authorized to allow any goods to be removed and cleaned.]

§ 36, Allowing copper ore to be taken to be smelted, repealed by 5 & 6 Vict. c. 56, § 9.

§ 37. No goods warehoused, imported in bulk, may be delivered, except in the whole quantity of each parcel, or in a quantity not less than 1 ton weight, unless by special leave.

§ 38. Nor are they to be delivered, until they or their packages be marked as the commissioners may deem necessary and practicable.

§ 39. The Treasury may make regulations for ascertaining the amount of any decrease or increase of the quantity of any particular sorts of goods, and direct what abatement of duty payable under this act for deficiencies may be made; but if such goods be lodged in warehouses of special security, no duty is to be charged for any amount whatever of deficiency on exportation, except in cases where suspicion may arise that part has been clandestinely conveyed away; nor are such goods (unless wine or spirits), to be measured, counted, weighed, or gauged for exportation, except in such suspicious cases.

§ 40. In warehouses not of special security, the following allowances for waste are to be made on exportation, viz.:—

Wine, upon every cask, viz.:—For any time not exceeding 1 year, 1 gal.; exceeding 1 year, and not exceeding 2 years, 2 gals.; exceeding 2 years, 3 gals.

Spirits, upon every 100 gallons hydrometer proof, viz.—For any time not exceeding 6 months, 1 gal.; exceeding 6 months, and not exceeding 12 months, 2 gals.; exceeding 12 months, and not exceeding 18 months, 3 gals.; exceeding 18 months, and not exceeding 2 years, 4 gals.; exceeding 2 years, 5 gals.

Coffee, cocoa-nuts, pepper, for every 100 lbs., and in proportion for any less quantity, 2 lbs.

§ 41. In cases of embezzlement and waste through misconduct of officers, damages to be made good to the proprietor. [By 5 & 6 Wm. IV. c. 66, § 4, it is provided that nothing contained in this section shall be held to extend to loss occasioned by fire, and by 5 & 6 Vict. c. 47, § 50, the commissioners are authorized to remit the duties on any goods destroyed "by any unavoidable accident" in the warehouse.]

§ 42. Upon the entry outwards of goods to be exported from the warehouse, and before cocket is granted, the person in whose name they are entered must give security by bond in double the value of the goods, with one surety, that they shall be duly exported, and landed at the place for which they are entered outwards, or otherwise accounted for.

§ 43. Requiring bond on the exportation of beef or pork that they are not to be used as sea-stores, is repealed by 5 & 6 Vict. c. 47, § 49.

§ 44. No goods are to be exported from the warehouse to the Isle of Man, except such as may be imported thither in virtue of license.

§ 45. All goods must be removed under the care of the proper officer.

§ 46. Warehoused goods must not be exported in ships under 70 tons burden.

§ 47. Goods landed in docks, and lodged in the custody of the proprietors thereof, under this act, not being seized as forfeited, are to continue liable to such claim for freight as they were liable to whilst on board; and the directors and proprietors of such docks are authorized, upon due notice by the master or owners, or others interested, to detain such goods until the freights and other charges be duly satisfied, or until a deposit be made equal in amount to the claim.

WARRANTY, in the contract of insurance, is an engagement on the part of the insured, that a certain thing has happened, or is to happen. It is part of the consideration for which the underwriter accepts the engagement; it is therefore an absolute condition, and if it do not occur as specified, the insurance is void, whether the circumstance be owing to the conduct of the insured or not, and whether it affect the risk or not. Warranty and mere representation differ from each other in this, that the former must absolutely agree with the event to the most minute particular, while the latter only requires to agree in substance, and does not affect the contract, unless through fraud or negligence it shall have increased the actual risk. It is divided into express and implied,—the latter being merely used to express the conditions on the part of the insured necessarily arising from the nature of the contract; as, that the ship shall be seaworthy, navigated with skill and care, that the voyage is lawful, and shall be performed without wilful deviation, &c. The most important and ordinary warranty during peace, is generally as to the time of sailing. Where a ship is warranted "*to sail*" on a particular day, she must be really on her voyage, having made every preparation, by having taken in her whole cargo, cleared at the custom-house, &c.; and if so prepared for her voyage, and having set sail, she be afterwards detained in some port of the same territory, as by an embargo, or to form convoy, it will be held as compliance; but not so if the preparations for commencing the voyage have not been completed, or if, having been completed, the vessel is prevented from breaking ground by stress of weather or otherwise. "As to the question, what shall amount to a *sailing*, to satisfy the warranty, there can be no doubt that, where a ship once breaks ground, and is fairly under sail *upon her voyage*, though she go ever so little a way, and afterwards put back from stress of weather, or apprehension of an enemy in sight; or if she be then put under an embargo, and detained beyond the time of sailing; this is still a *beginning* to sail, and the interruption does not alter the case, because the warranty is already complied with" (*Marshall*, 365). There is a distinction between a warranty to sail, as above, and a warranty to *depart*, the latter being held to import that the vessel is finally out of port.

All express warranties must appear on the face of the policy. It does not require, however, to appear in the body of the policy,—a note on the margin suffices. [SEAWORTHINESS and DEVIATION.] (*Park on Insurance. Marshall on Insurance.*)

For warranty in insurance against fire and on lives, see INSURANCE.

WATCH (Fr. *Montre.* Ger *Uhr*, *Taschenuhr*), a pocket timepiece composed of wheels and pinions,—a regulator to direct the quickness or slowness of the wheels, and a spiral spring which communicates motion to the whole. *Chronome-*

ters are watches having the variable force of their mainspring equalized by a fusee or variable lever, and also an expansion balance as a compensation for heat and cold. Nautical chronometers are larger machines of the same kind, secured in a box, and used for ascertaining the longitude at sea.

Spring watches were invented about 1658 by Dr Hooke, or as some contend in 1656 by Mr Huyghens, and various improvements have been since effected in their construction. In 1764, a chronometer made by J. Harrison of London was adjudged to entitle him to the premium of £20,000 originally offered by Queen Anne for the discovery of the longitude. Besides Harrison, the names of Mudge, Earnshaw, sen., Arnold, sen., Brockbank, and Arnold & Dent, have attained celebrity as chronometer-makers.

Watch movements are made chiefly in London, Coventry, and Lancashire; but they are polished and adjusted in most large towns throughout the kingdom. Watch-cases, though not subject to any duty, are stamped at the assay offices to determine the fineness of the metal. The annual value of the manufacture in this country is estimated at £1,500,000, and nearly 20,000 British watches are annually exported.

The principal seat of the watchmaking trade on the continent is Switzerland. In that country, says Dr Bowring, it is carried on in the mountainous districts of Neuchatel, where nearly 120,000 are produced annually, in the canton of Berne, and in the district of Geneva. "Switzerland has long furnished the markets of France; and though the names of certain French watchmakers have obtained a European celebrity, yet I was informed by M. Arago that an examination into this trade had elicited the fact that not ten watches were made in Paris in the course of a year, the immense consumption of France being furnished from Switzerland, and the Swiss works being only examined and rectified by the French manufacturers. The contraband trade into France was immense." (*Report on Switzerland*, p. 34.) The Swiss and French watches, however, are commonly much inferior to the English, being in general single-cased and flimsy in their construction.

WAX (Du. *Wasch.* Fr. *Cire.* Ger. *Wachs.* It. Por. & Sp. *Cera.* Rus. *Wosk*), or *Bees' Wax*, a firm solid substance, moderately heavy, and of a yellow colour, formed by melting the comb into cakes after expressing the honey. The best is that of a lively colour, and an agreeable odour something like that of honey. When new it is toughish, yet easy to break; but by age it becomes harder, more brittle, loses its fine colour, and in a great measure its smell. Wax is generally bleached and used in making candles. It is also used in taking casts and moulds, and as an ingredient in cerates and ointments. In addition to our large home supply, about 8000 cwts. are annually imported, chiefly from W. coast of Africa, Barbary, and the E. Indies; but in small quantities also from the W. Indies, United States, Germany, and France.

WEIGHTS. [MEASURES.]

WELD, a plant (*Reseda luteola*) formerly cultivated in Britain for the yellow dye which it yields; but which is now superseded by quercitron.

WESTERN AUSTRALIA, a British colony, comprising the settlements of Swan River and King George's Sound, lies between lat. 31° and 35° 8′ S., and to the W. of long. 125° E., on the S. W. corner of that continent.

This colony was founded in 1829; but being established on principles which led to the dispersion of the early settlers, its progress was discouraging until of late, when affairs were placed on a more hopeful footing, chiefly through the exertions of the Western Australian Company.

The leading geographical feature is the Darling range, extending N. and S., parallel to and about 50 miles distant from the W. coast; and from whence the Swan, Avon, Murray, and other rivers running to the westward take their rise. The soil is of a mixed character, and the climate resembles that of E. Australia. The capital is Perth, on the river Swan, which has also Freemantle near its mouth; and at King George's Sound, on the S. coast, are the insignificant towns of Augusta and Albany; but there are scarcely any commodious harbours. The statistics of the colony in the year 1840-41 were as follows:—Population, 4000; stock of every kind, 40,000; shipping entered inwards, 30,000 tons. Exports of wool, 50,000 lbs.; revenue, £9,650.

AUSTRALIND lies to the N. of the preceding settlement, between Gantheaume Bay, in lat. 27° 40′, and the Arrowsmith River, in lat. 29° 30′ S. Its great recommendation is the fine harbour of Port Grey, in lat. 28° 55′ S. An extensive tract of the country has been purchased by the Western Australian Company from the British government; and colonization is proceeding on the principle which has been applied in SOUTH AUSTRALIA.

WEST INDIES (BRITISH), comprise Jamaica, one of the Greater Antilles; a variety of the smaller islands forming the Caribbean Chain, classed as Windward and Leeward; and the Bahamas. Total population, 714,720,—more than four-fifths being emancipated negroes. These islands have, with few exceptions, colonial governments, with an elective legislative assembly, who enact all local laws, subject, however, to the veto of a governor appointed by the crown.

The general aspect of the West India archipelago is mountainous. Many of the islands exhibit manifest proofs of volcanic origin; and they are all subject to violent shocks of earthquakes. Their soil is in general productive far beyond that of most parts of Europe; moisture and heat combining to produce a surprising luxuriance of vegetation. The year, as in most tropical climates, is divided into two seasons, the *dry* and the *wet*; yet four may be distinguished,—the spring, with gentle showers in April and May; the hot sultry summer, from May till October, when the heavy autumnal rains begin, and continue till December; from which till April, in fact the winter, serene and cool weather prevails. Between August and the end of October, the islands, except Trinidad and Tobago, which lie farthest S., are subject to furious hurricanes; these, however, are not very frequent, and are unknown except during this short period.

JAMAICA, the most important of the British West India Islands, situate 100 miles S. of Cuba, is 165 miles long by 40 in average breadth. It is traversed from E. to W. by the lofty Blue Mountains, covered with majestic forests. On the N. side the surface rises from the shore with gentle undulations, separated by spacious valleys, and clothed with pimento groves and coffee plantations. On the S. side the land is bolder, and interspersed with hill-ranges, between which are extensive savannahs and sugar-estates. But upon the whole, the island, though well watered, and in some parts fertile, is not generally productive, and requires skilful cultivation to make it yield heavy crops. The seat of government is Spanish Town; it lies inland 16 miles distant from Kingston, the principal town, situated on Port Royal, on the S. coast, in lat. 17° 58′ N., long. 76° 46′ W., pop. 33,000. The other ports (all free) are Morant, Black River, and Savanna-la-Mar, also on the S. coast; and Lucea and Montego Bay, Falmouth, St Ann, Ports Maria and Antonio, and Annotto Bay on the north.

WINDWARD ISLANDS. *Barbadoes*, the most easterly of the Caribbean chain and oldest of the British W. India colonies, is about 21 miles in length, and 14 in breadth. The surface, though irregular, is comparatively low, and is almost all highly cultivated; while, being directly exposed to the N. E. trade-wind, it is cooler and more salubrious than any of the other islands. Capital, Bridgetown, in Carlisle Bay, on the S. W. coast, in lat. 13° 5′ N., long. 59° 41′ W.; pop. 20,000.

St Vincent, 108 miles W. from Barbadoes, extends about 17 miles from N. to S. It is rugged and mountainous, and only about one-third is under cultivation; but the soil of the good land is well adapted for sugar. Capital, Kingstown, on the S. W. coast. The Grenadine islets are dependencies of St Vincent.

St Lucia, about 20 miles N. N. E. St Vincent, is rather fertile, though hilly; but the climate is moist, variable, and noted for its unhealthiness. Capital, Carenage.

Grenada, 68 miles S. S. W. St Vincent, is also fertile, but unhealthy. About 5-8ths of the surface is cultivated. Capital, Port George.

Tobago, 16 miles N. E. Trinidad, is exceedingly mountainous, with a climate resembling the latter. Cultivation is mostly confined to low lands, on the S. side, where is situate Scarborough, the capital, in lat. 11° 15′ N., long. 60° 40′ W.

Trinidad, taken from Spain in 1797, is the most southerly of the Windward Islands, and lies only 13 miles distant from the N. E. coast of Venezuela in S. America. It is crossed from W. to E. by three mountain-chains, well wooded; and the valleys and plains are said to be naturally extremely fertile; but the greater portion of the interior is uncultivated, and indeed partly unexplored. The settled districts are mostly confined to the N. W., and a few places along the S. W. coast. Capital, Port Spain, with a good harbour on the W. side.

LEEWARD ISLANDS. *Antigua*, 40 miles N. Guadaloupe, is oval-shaped, and about 20 miles in length. It has comparatively little of the mountainous character, is without rivers, and the climate is remarkable for its want of moisture. Capital, St John, on the N. W. side, lat. 18° 22′ N., long. 64° 42′ W.; but the best port is English Harbour, on the S. coast.

St Christopher or *St Kitts*, 50 miles W. by N. Antigua, abounds in rugged barren mountains; but the soil of the plains is exceedingly rich. Capital, Basseterre on the S. W. side.

Dominica, lying between Guadaloupe and Martinique, contains high rugged hills, interspersed with well-watered valleys, having a light soil, adapted rather for coffee than sugar. Ports, Roseau, or Charlotte Town, the capital, on the S.W. side, and Prince Rupert's Bay on the N.W.

The only others worthy of notice are—*Nevis*, 3 miles S. E. St Kitts, a beautiful spot, though only a single mountain; capital, Charlestown: *Montserrat*, 32 miles S. E. Nevis, of which two-thirds are mountainous or barren; capital, Plymouth: *Anguilla*, a long flat island, contiguous to St Martin, and 45 miles N. W. St Kitts: *Barbuda*, a level fertile island, the property of the Codrington family, 36 miles N. Antigua: And *Tortola*, *Virgin Gorda*, *Anegada*, and others of the *Virgin Islands*, a cluster of lofty islets adjoining Porto Rico.

THE BAHAMAS or LUCAYAS are a chain of low islands scantily covered with soil, stretching from Florida to Hayti, on the remarkable sand flats and coral reefs called the Bahama Banks. Principal island, *New Providence*, containing Nassau, the capital.

The great staples of the West Indies are sugar, rum, molasses, and coffee; many also produce cocoa (chiefly Trinidad and Grenada), cotton, and tobacco; and some indigo, pimento, ginger, lignum vitæ, and other hardwoods and drugs. These are almost wholly shipped to the United Kingdom; and the following table shows the total quantities of the leading articles exported in 1831 and 1841 from the different islands; to which, for the sake of comparison, we have added the quantities brought from Demerara and Berbice. [GUIANA.]

	Area.	Population.	1831.			1841.		
			Sugar.	Rum.	Coffee.	Sugar.	Rum.	Coffee.
	Sq. m.		Cwt.	Gals.	Lbs.	Cwt.	Gals.	Lbs.
Jamaica	6,250	370,000	1,429,093	3,522,463	15,644,072	528,585	1,276,551	7,618,890
Barbadoes	164	102,500	379,052	26,733	2,420	257,108	249	1,513
St Vincent	130	26,530	221,662	160,211	44	110,205	88,999	....
St Lucia	275	16,000	72,376	12,628	89,349	51,115	13,037	13,287
Grenada	125	22,500	185,771	328,471	5,863	84,270	83,704	133
Tobago	102	13,700	121,249	498,717	....	48,164	153,614	76
Trinidad	2,000	39,330	327,167	64,933	3,008	284,605	2,297	38,622
Antigua	108	35,000	193,177	163,849	212	144,103	14,906	7,848
St Christopher	69	23,500	101,968	256,932	....	63,936	55,118	12
Dominica	290	18,830	56,339	63,007	613,360	42,342	8,011	127,649
Nevis	20	11,500	49,924	147,750	4	12,124	2,936	....
Montserrat	47	7,600	26,137	40,629	....	10,839	9,281	....
Tortola		7,730	15,559	48	....	8,397	834	....
Bahamas	5,424	20,000	....	....	95,716	100	4,566	5,130
Demerara	23,000	76,000	802,134	2,332,970	1,991,352	415,261	935,735	745,631
Berbice	22,000	76,000	122,088	224,579	1,585,402	90,063	120,301	1,363,938
			4,103,696	7,843,920	20,030,80[illegible]	2,151,217	2,770,139	9,927,689

The great falling off between 1831 and 1841 is attributable mainly to the change produced by the measure of negro emancipation; but of late years there have likewise been deficient crops arising from ordinary causes.

The imports consist of lumber from British America; herrings, codfish, flour, salt beef, and other kinds of provisions; wine; and manufactures of all kinds from the mother-country. On an average of the five years to 1841, the declared value of British produce and manufactures carried to our West India colonies (including Guiana), amounted to £3,400,000. Of this, however, a considerable portion is destined for re-exportation to the Spanish main.

Vessels with homeward cargoes begin to arrive in Britain in April and continue till October. And the annual orders for plantation stores are received by our West India merchants in autumn, distributed amongst the manufacturers or dealers in September and October, and shipped in November and December.

Measures and Weights, same as Britain. *Money.*—Accounts are now generally kept in sterling; but in some places in dollars, which by proclamation, September 21, 1838, are valued at 4s. 2d. sterling each: the value of the gold doubloon is fixed at £3, 4s. The Colonial Bank, instituted in London, 1836, has branches in most of the islands, which issue notes, and otherwise conduct business on the Scottish system. [See Colony. Slave. Sugar.]

WEST INDIA ISLANDS (FOREIGN), embrace, besides Hayti, now independent, the following possessions of European powers:—

Spain has the magnificent island of Cuba, already described. *Porto Rico*, a large, well watered, fertile, and comparatively healthy island, 80 miles E. of Hayti; area, 3,700 square miles; population, 360,000, including only 42,000 slaves: Capital, San Juan: chief exports in 1839, 692,458 cwts. sugar; 85,434 cwts. coffee; and 3,311,720 gallons molasses. Also the islets *Margarita*, *Testigos*, *Tortuga*, *Blanquilla*, *Orchilla*, *Rocca*, and *Aves*.

France possesses *Guadaloupe*, 40 miles S. E. Antigua, consisting really of two islands, Grande Terre and Guadaloupe Proper or Basse Terre, separated by the Salt River Channel. Chief ports, Basse Terre, the capital; and Point-à-Pitre, nearly destroyed by an earthquake, February 1843. Chief exports in 1836, 36,377,548 kilog. sugar; 2,554,424 kilog. molasses; 915,354 kilog. coffee. *Martinique*, 20 miles N. St Lucia; capital, Fort Royal; chief exports in 1836, 22,994,754 kilog. sugar; 2,483,593 litres molasses; 519,507 kilog. coffee. Also the islets *Marie Galante*, *All Saints*, *Descada*, and *St Martin* (N. part).

Holland has *Bonaire*, *Curaçoa*, *Oruba*, *St Martin* (S. part), *Saba*, and *St Eustatius*.

Denmark possesses *St Thomas* and *St John* in the Virgin group; also *St Croix*.

Sweden has only *St Bartholomew*.

The geographical character, productions, and course of trade of these islands, are similar to those of the British West India Islands.

WHALE, a cetaceous class of marine animals, of which there are several species; the principal being the Greenland whale (*Balæna mysticetus*, Linn.), usually from 50 to 60 feet in length, and from 30 to 40 feet in circumference, inhabiting chiefly the Arctic seas; and the spermaceti whale, already described. [Spermaceti.] Both are of commercial importance on account of the oil contained in their fat or *blubber*, and of the *whalebone*, or horny laminæ in their upper jaw, which is applied to various useful purposes; and large fleets are fitted out for their capture.

The Northern Whale Fishery originated in the discoveries of the voyagers who, in the end of the 16th century, attempted to find a passage through the Northern Ocean to India. It was first pursued, by the English and Dutch, in the seas of Greenland and Spitzbergen; and their example was speedily followed by others. The fishery was long confined to these seas; but after 1815, they were gradually abandoned for Davis' Straits, where also whales have recently become so scarce, that their pursuit by British vessels has nearly ceased. In the twenty years ending 1834, the average annual number of our ships employed in this fishery, was 120; aggregate burden, 37,000 tons; procuring 1024 whales, yielding 11,313 tuns oil, and 590 tons whalebone; making the annual produce, at the average prices of £28, 15s. per tun for oil, and £163 per ton for whalebone, about £420,000. The vessels were fitted out mostly from the north-eastern ports. But this great fishery, which in 1820 employed 50,000 tons of shipping, manned by our best seamen, now engages only one or two vessels from Peterhead and the adjoining ports.

The Southern Whale Fishery was begun by the British during the interruption which the northern fishery suffered owing to the American war, and it gradually rose to importance. It consists of two branches:—*1st*, The capture of the spermaceti whale, the cruising ground for which extends from the meridian of Japan to beyond Australia, and longitudinally from Cape Horn to the Indian Archipelago: the vessels are found and provisioned for three years, the period of their general absence from England: *2d*, The common black whale of the Southern seas, met with principally on the S.E. coast of South America. Of late years, this fishery has also fallen off; and, in 1840, the shipping fitted out from Britain, for both the Northern and Southern fisheries, amounted to only 15,000 tons. It has also been nearly abandoned by the Australian colonists, by whom it was prosecuted for some years, owing to the greater profits derived from investing their capital in sheep-farming.

Notwithstanding this decline of the British fishery, however, it would appear that the activity and enterprise of the Americans can still render whaling voyages so profitable, that, in 1841, they had engaged in them no fewer than 193,000 tons of shipping. See United States.

WHARF, a sort of quay erected contiguous to a harbour or roadstead. *Wharfage*, the dues payable for its use in the landing or shipping of goods.

WHEAT (Dan. *Hvede*. Du. *Tarw*. Fr. *Froment*, *Blé*. Ger. *Weitzen*. It. *Grano*, *Formento*. Por. & Sp. *Trigo*. Ru. *Pschenisa*), the most valuable of the bread-corns of the temperate zone, is a plant of which there are numerous species; the most important in Britain and Northern Europe being Winter or Lammas Wheat (*Triticum hybernum*). It is generally sown in autumn, but often in spring, in which case it is sometimes called spring-wheat. Of this species there are numerous varieties; but they may be divided into two classes, red and white; the former the more hardy, but the latter excelling in the quality of their produce. The best soils for wheat are those which are stiff or clayey. From two to three bushels of seed are required to the acre; and the produce, though very variable, may be held for a fair crop to be 30 bushels per acre. But the average produce of England does not perhaps exceed 22 bushels, nor that of Scotland 25. The weight of the straw is reckoned to be about double that of the grain. An acre, therefore, yielding 25 bushels of wheat, at the rate of 60 lbs. per bushel, would yield 3000 lbs. of straw, or about 26½ cwts. (*Low's Agriculture.*) The average yield of flour is 12½ lbs. to 14 lbs. of grain. In the United Kingdom, wheat is produced chiefly in England, particularly in the counties of Kent, Essex, Suffolk, Rutland, Hertford, Berks, Lincoln, Hants, and Hereford. In Scotland, and especially in Ireland, the climate is in general too cold and moist for the profitable culture of wheat; though, in the counties of Haddington, Edinburgh, Linlithgow, Perth, Forfar, and Stirling, there are extensive tracts distinguished both for the quantity and quality of their produce. [CORN.]

WHISKY, a spirituous liquor distilled from barley, and called *malt* or *grain* spirit, according as more or less of the former is used in the process. Malt whisky is esteemed the best, especially when the distillation is conducted slowly in small stills. This spirit is largely manufactured in Scotland, Ireland, and the United States. The finest is the Scotch, especially that of the Highland distilleries.

WHITEBAIT, a small species of herring (*Clupea alba*), caught in the Thames below Woolwich, from April to September.

WHITING, a fish of the cod kind (*Merlangus Vulgaris*, Cuv.), caught in abundance all round our coast, particularly in January and February.

WINE (Du. *Wyn.* Fr. *Vin.* Ger. *Wein.* It. & Sp. *Vino.* Por. *Vinho.* Rus. *Wino*), is the fermented juice of the grape. The varieties of wine depend chiefly on the quantity of sugar contained in the *must*, and the manner of its fermentation. When the quantity of sugar is sufficient and the fermentation complete, the wine is generous and perfect; if the proportion of sugar be too small, the wine is thin and weak; if it be too large, part of it remains undecomposed, and the wine is sweet and luscious; and if it be bottled before the fermentation is completed, it will, as in the case of champagne, proceed slowly in the bottle, and on drawing the cork, the wine will sparkle in the glass. When the must is separated from the husk of the grape, before it is fermented, the wine has little colour, and is called *White wine.* But if the husks are allowed to remain in the must while it is fermenting, the alcohol dissolves the colouring matter of the husks, and the wine is coloured; such is called *Red wine.* Wines besides vary much in flavour; a quality which, in a few kinds, is imparted by nature, but which in the general case is produced by the art of the manufacturer.

The vine is a hardy plant, but agrees best with light gravelly soils, or those abounding in volcanic debris, and a temperately warm climate. In colder countries, the grape-juice becomes too poor, and in warmer too saccharine for wine-making. In Europe, the wine district is comprised between lat. 36° and 51° N., within which limits almost all the wines of commerce are produced; and from whence large quantities are sent to the N. of Europe and to America. In the east, comparatively little is grown or used; being forbidden to the Mohammedans as the cause of "more evil than profit;" and never taken by the Hindoos but as a medicine. In China, rice and palm wine are made in large quantities, but little is made from the grape; though of late they have evinced a taste for European wines, particularly sherry.

Descriptive Table of the Principal Wines.

"FRANCE is the vineyard of the earth. Her fertile soil, gentle acclivities, clear sunny skies, and fine summer temperature, place her, in conjunction with her experience and the advantages of science applied to vinification, the foremost in the art of making the juice which so gladdens the human heart" (*Redding*, pp. 53, 57). The departments which excel in the quality, though not in the quantity, of their produce, are those comprised in the ancient provinces of Burgundy and Champagne, whence the wines derive their names.

Burgundy, grown chiefly in the department of Côte d'Or, is a fine dry wine, of the most exquisite delicacy, flavour, and *bouquet*. It is light, yet with sufficient body and spirit. It is made both red and white; but the latter is little known in Britain. The choice red growths are *Romanée Conti*, *Chambertin*, and *La Tache*. The best white is *Mont Rachet*. Alcoholic strength, 15 per cent. Burgundy, however, possesses greater stimulant powers than can be explained from this proportion of spirit.

Champagne, a class of light wines of superior delicacy, divided into red and white kinds, each either *still* or sparkling (*mousseux*). The red is little known in Britain. The white is generally in perfection the third year of bottling. The still is comparatively strong and heating,—but when of superior quality, has the peculiar aroma of the wine in an eminent degree. The sparkling is chosen of moderate effervescence; that which merely creams on the surface (*demi-mousseux*) being preferred to the full frothing wine (*grand-mousseux*); which last also keep worst. Champagne is improved in summer by ice. Alc. strength, sparkling, 12 per cent.; still, 14 per cent. *Sillery* is a white still kind of the first class, produced near Rheims.

Claret is a name given in England to the red wine of Medoc, in the Gironde, imported from Bordeaux; or more commonly a mixture of that wine and Beni Carlos, or some other full wine. In France, *Clairet* is a general name for all rose-coloured wines. When in perfection, claret should be of a rich colour; a bouquet partaking of the violet, and of a very agreeable flavour. The prime growths are *Lafitte*, *Latour*, and *Margaux*. It is less heating, and more aperient than most other wines; but is comparatively short-lived: it is preferred when about 10 years old. Alc. strength, 15 per cent.

Sauterne, a fine dry lightish-brown wine, is also the growth of the Gironde; as are likewise *Pontac* and *Barsac*, both durable, dry, and also lightish-brown in colour.

Graves, a class of wines of the Bordelais. The white kinds have a dry flinty taste, with an aroma resembling cloves: the choicest are *St Bris* and *Carbounëeux*. Of the red kinds *Haut Brion* ranks highest. They keep for 20 years.

Hermitage is grown near Tain on the Rhone. The white variety is of superior quality; it is of a straw-yellow colour, rich taste, very peculiar odour, and lasts nearly a century without deterioration. The red variety is short lived.

Côte Rôtie is a red wine, grown near Lyons. Though slightly bitter, it excels in clearness, colour, and perfume.

Rousillon, a class of wines, the best of which have body and fineness, and at first are very sweet and of a deep colour; but in eight or ten years they acquire a golden hue and a delicate agreeable taste. *Masdeu*, one variety, is said to combine in some degree the fulness and vinous properties of Port, with the flavour, aroma, and bouquet which characterize the French wines.

Frontignan, a muscadine wine of Languedoc, occurs both red and white; and will keep about 20 years in bottle: when old it resembles Malaga. *Lunel*, also grown in Languedoc, resembles Frontignan, but is stronger.

Rivesaltes, a rich white muscadine, grown near the Pyrenees, belongs to the class called in France *vins de liqueur*.

SPAIN follows France in the excellence of its wines. And from north to south, sites, soils, and exposures of the happiest kind for the vine, cover the face of the country.

Sherry, the most important, grown at Xeres near Cadiz, is made both pale and brown. The pale is generally preferred; but "sherries are never to be judged by colour, but solely by taste." When good, this wine has a fine flavour, warm taste, and some portion of the agreeable bitterness of peach-kernels. When new, it is harsh and fiery, but is mellowed by being kept four or five years in wood: it does not attain perfection until 15 or 20 years old. When of a due age and good condition it is very fine and wholesome, and free from excess of acid, with a dry aromatic flavour and fragrancy which render it a fit stimulant for delicate stomachs. Of late years its manufacture has been greatly improved,—alc. str. 20 per cent. *Amontillado* is a rare, dry, delicate kind of sherry.

Paxarette, made near Xeres, from the sherry grape, is a rich cordial malmsey wine, sparkling, and of a light amber colour. *Tent*, likewise grown near Cadiz, is a rich red muscadine, drank generally as a stomachic.

Malaga is a secondary kind, with a peculiar taste, from being mingled with wine burned a little in the boiling. *Lagrimas* Malaga is made from the droppings of the grape without pressure. *Mountain* is a sweet variety of Malaga.

Beni Carlos is a deep red wine imported from Valencia.

THE SPANISH ISLAND of Majorca, and the Madeiras and Canaries, likewise produce good wine.

Alba Flora is a white kind, grown in Majorca; it approaches Sauterne in flavour.

Madeira is a strong dry white wine, uniting great strength and richness of flavour, with a fragrant and diffusable aroma. It is mellowed and improved in flavour by a voyage to India. It is very durable, and indeed is said not to be in condition until it has been 10 years in wood and 20 in bottle. It is highly stimulant, and is well adapted for debilitated constitutions; though in its purest form more acid than either port or sherry. Alc. str. 22 per cent. *Sercial* is a fine kind of Madeira; and *Malmsey* is a very rich luscious species of the highest quality, made from over-ripe grapes. *Tinto* is a red kind, wanting the high aroma of the white sorts, and when old resembling tawny port.

Teneriffe, or *Vidonia*, is a dry canary wine resembling Madeira, but inferior.

PORTUGAL.—*Port*, a red wine of the Upper Douro, is, when new and unmixed, rough, strong, and slightly sweet; but after being kept in bottle, it loses some of its astringency and most of its sweetness, while its flavour is improved. Being, however, largely brandied, it requires, if imported *green*, to be kept three or four years in wood, and from four to seven in bottle, before the odour of the brandy is subdued, and the genuine aroma of the wine developed. It is heating, but when of good quality, wholesome; though peculiarly noxious when taken in excess. Alc. str. 22 per cent.

Lisbon is a secondary wine. *White Lisbon* resembles inferior Madeira; it is made both dry and muscadine. *Red Lisbon* is coarse and dry.

Bucellas, a light white wine grown near Lisbon, resembles Barsac when pure; but, as imported, it is fiery from sophistication with brandy.

Carcavellas, also imported from Lisbon, is a sweetish white wine grown near Œira.

Figueira, is a strong coarse red wine.

GERMANY produces little good wine except on the banks of the Rhine (chiefly between Bonn and Mayence), and its tributaries, the Mayn, Moselle, and Neckar. The growths of these districts, however, form a class of a peculiar and distinct character. They are generous, dry, finely flavoured, and endure age beyond example. They average about 12 per cent. of alcohol. The inferior kinds are naturally acid, but this is not, as is sometimes alleged, the constant character of the German wines. Of the Rhine wines the choicest is *Johannisberg*; of the Mayn wines, *Hockheim*, or, as it is called in England, *Hock* (a term sometimes vulgarly applied to all German wines); of the Moselle wines, *Brauneberg*; and of the Neckar wines, *Bessingheim*.

AUSTRIA possesses scarcely any but poor wines; but Hungary produces the celebrated

Tokay, a rich luscious wine, of a peculiar aromatic flavour; it is, however, scarce, dear, and little known in Britain.

ITALY has none of any celebrity except

Lacryma Christi, a first class wine, grown only in small quantities near Naples. It is luscious, rich, red, and of exquisite flavour.

SICILY produces and exports wine in abundance; but it is generally of very low quality, and fiery from mixture with coarse brandy.

Marsala or *Bronte Madeira*, is a dry white wine, of great body, resembling second class Madeira.

Syracuse, is the name given to a luscious red muscadine; also to a white *vin de liqueur*.

Ætna, the best, is a strong red wine.

Cape of Good Hope. The Cape wines, except *Constantia* (a rich luscious kind), are of the worst description, being generally infected with the earthy taste common to wines grown on bad soils. Some are sweet, but the larger part are dry. They are called *Cape Madeira*, *Cape Sherry*, *Cape Hock*, &c.

Asia produces no wine for exportation, except perhaps the celebrated *Shiraz* of Persia, some of which is occasionally sent to India.

America. Wine is made both on the north and south continent, particularly in N. Carolina; in Peru and Chili; and at Mendoza in Buenos Ayres, near the Andes; but none is shipped to Europe.

Australia. Some attention is bestowed on wine in the colony of New South Wales.

In 1841, the quantity of wine imported into the United Kingdom was 7,708,502 gallons: and there were entered for consumption 2,412,821 gallons Spanish; 2,387,017 Portuguese; 353,740 French; 107,701 Madeira; 55,242 Rhenish (or German); 25,635 Canary; 137 Fayal; 441,238 Cape; and 401,429 Sicilian and other sorts; total, 6,184,960 gallons. On January 5, 1842, there were under bond, 10,775,380 gallons; whereof in London, 6,618,569; and in Dublin, Leith, and other ports, 4,156,811 gallons. The surplus imported beyond the consumption is re-exported chiefly to India and our colonies in Australia and America.

Prior to 1693, the wines of France were those chiefly consumed in this country; but the higher duties imposed on them in that year, and the fiscal advantages given by the Methuen Treaty to Portuguese wines in 1703, led gradually to the former being nearly superseded by the latter and the wines of Spain. And after 1793 (when Britain used about 7,000,000 wine gallons yearly), the consumption of all kinds was checked by the extravagant duties imposed for the prosecution of the war. In 1825, these were modified to 7s. 3d. per (Imp.) gallon on French wine; 4s. 10d. on other foreign sorts; and 2s. 5d. on Cape; and in 1831, when the discriminating duty on French wine was abolished, they were fixed at 5s. 6d. per gallon on all foreign wines, and 2s. 9d. on Cape. Since the reduction in 1825, a considerable increase has taken place in the consumption of sherry.

The Standard Gauges of wine recognized in trade are—pipe of Port, 115 gals.; pipe of Lisbon, 117 gals.; pipe of Cape or Madeira, 92 gals.; pipe of Teneriffe, 100 gals.; butt of Sherry, 108 gals.; hogshead of Claret, 46 gals.; aum of Hock, 30 gals.—all Imperial measure.

Farther information will be found under Customs Regulations, Warehousing System, and in the articles on the different wine countries; also in the well-known Treatises on Wine by Dr Henderson and Cyrus Redding.

WINTER'S BARK (*Wintera aromatica*), a spice resembling canella alba.

WOAD, a plant (*Isatis tinctoria*), from the roots and leaves of which a blue dye is obtained; but its use is now almost entirely superseded by indigo.

WOOD. [Timber.]

WOOL (Du. *Wol.* Fr. *Laine.* Ger. *Wolle.* It. and Sp. *Lana.* Por. *La*, *Laa.* Rus. *Wolna*, *Scherst*), the fleecy covering or *pile* of the Sheep. Wools are distinguished by their length or *staple*, and by the fineness of their filaments. Long wool, commonly that which exceeds 3 inches in length, is best adapted for the manufacture of worsted stuffs; while short wool, that less than 3 inches, is chiefly employed for cloths and other articles. These two kinds, which are the produce of distinct varieties of sheep, are also distinguished by the manner in which they are prepared for being spun. The long wools, like flax, are combed; while the short wools are carded; whence the former are familiarly termed *combing wools*, and the latter *carding* or *cloth wools*. In England, the chief long-woolled sheep is the *Leicester*, and the chief short-woolled the *South Down*. The fleece of the latter is very fine; it is, however, greatly inferior to that of the *Merinoes*, a Spanish breed, but which has been introduced with signal success into Germany, Australia, and the Cape Colony.

Wool ought to be pliable, elastic, and above all, soft to the touch, a property for which the Saxon wools are noted: the filament too ought to be regular, it should be free from hairs or *kemps*. Farther, it ought to be curly or crispy, with the peculiar property of felting. Each fleece contains wool of different qualities; the best is that on the spine and sides. And that shorn from the live sheep, called *fleece wool*, is superior to that cut from its skin after death, called *dead wool*; the latter being comparatively harsh, weak, and incapable of imbibing the dyeing principles, an objection to which also black wool is liable. The assorting or *stapling* of wool is sometimes performed by the manufacturer, but chiefly by *wool-staplers*, who purchase the raw material from the grower, and dispose of it, after it is assorted, to the manufacturer.

The exportation of wool was prohibited in 1660, mainly from a desire to preserve to ourselves the English long wool, a kind not produced in any other country; but this policy was more injurious to the agriculturist than beneficial to the manufacturer, and the improvements in machinery having enabled short wools to be applied to many of the purposes for which long wools had been appropriated, the prohibition was withdrawn by Mr Huskisson in 1825. Since then, the exports of British wool have gradually increased, and in 1841 amounted (exclusive of yarn) to 8,471,235 lbs., of which 7,544,196 lbs. went to Belgium, and 894,704 lbs. to France.

The importation of foreign wool into Britain was free until 1802, when it was subjected to a duty of 5s. 3d. per cwt.; which was gradually raised to 6s. 8d. in 1813; and in 1819 (by Mr Vansittart) to 56s. per cwt., or 6d. per lb. This extravagant rate was gradually reduced in 1824 and 1825 to ½d. per lb. on wool under 1s. per lb. in value, and to 1d. per lb. on higher sorts. In 1819, the duty on colonial wool was fixed at 1d. per lb., and since 1825 it has been admitted free.

Prior to 1800, our annual imports of wool seldom exceeded 3,000,000 lbs.; afterwards they rapidly increased, but down to 1814 they chiefly consisted of Spanish produce. Since the peace, the great source of supply has been Germany; though of late years considerable quantities have likewise been brought from Australia, India, S. America, and the Cape Colony. In 1841 there were imported from Germany, 20,958,775 lbs.; Russia, 4,131,652 lbs.; Denmark, 778,256 lbs.;

Portugal, 679,071 lbs.; Spain, 1,088,200 lbs.; Italy, 1,502,254 lbs.; Turkey, 447,563 lbs.; Cape Colony, 1,079,910 lbs.; India, 3,008,664 lbs.; New S. Wales, 7,993,060 lbs.; Van Diemen's Land, 3,597,531 lbs.; S. Australia, 759,909 lbs.; La Plata States, 5,105,637 lbs.; Peru, 3,144,462 lbs.; Chili, 923,832 lbs.; making, with small quantities from other places, in all, 56,179,641 lbs. The quantity entered for home consumption was 52,862,020 lbs.; namely, 22,051,796 lbs. at duty of 1d. per lb., 14,495,002 lbs. at ½d. do, 4306 lbs. red wool at 6d. per lb. do., and 16,310,916 lbs. colonial wool, duty free. The surplus imported was re-exported to Belgium, France, and the United States. The Peruvian wool, it may be observed, is mostly that of the alpaca, a species of llama.

The sack of British wool of 2 weys, or 13 tods = 364 lbs. The last is 12 sacks. And the pack = 240 lbs. The German bale weighs about 350 lbs.

WOOLLEN MANUFACTURE. This art existed in England at a remote period, but in a rude state, as a great part of the raw wool produced in the kingdom was exported to Flanders in exchange for the finer cloths, down to the reign of Edward III., when the manufacture received an impulse from the immigration of a number of weavers from Ghent. Numerous laws were afterwards passed for its regulation; including among others the prevention of the exportation of British wool, the confinement of the art to certain localities; and the prohibition of the use of machinery. These laws, though in course of time abolished, materially retarded the manufacture. The statute of Edward VI. discouraging machinery, only repealed in 1807, was so effectual a bar to improvement, that until nearly the end of last century, the several processes were conducted in the same barbarous manner as in the reign of Edward III. Since 1807, a variety of machines have been applied to the carding and spinning of wool; while the power-loom has been employed in the weaving. The repeal of the prohibition to export British wool, which was not effected until 1825, by allowing the French to procure the long staple wool of England, at first enabled them to produce new stuffs superior to any that we had ever manufactured; but this superiority was not of long continuance. Stimulated by competition, our manufacturers in a few years introduced improved processes, which enabled them to produce merinos and other stuffs in every respect equal to those of France. And in the course of the ten years following the removal of the restriction, their exportation of such goods, instead of declining, increased to the extent of 50 per cent. (*Porter's Progress of the Nation*, p. 190).

Three great divisions of the trade are commonly recognised,—the manufacture of woollen cloth, of worsted or stuff articles, and of hosiery. And the chief districts in which they are pursued are as follow:—Woollen cloth in the West Riding of Yorkshire, Gloucestershire, Wilts, and Somerset; stuffs or worsteds at Bradford, Halifax, Leeds, and in Norfolk; hosiery in Leicestershire; woollen yarn in Suffolk and Lancashire. Besides which, carpets are made at Kidderminster, Wilton, and Axminster; and tweeds, plaiding, and woollen shawls, in Scotland.

The English cloth manufacture is carried on generally in three ways. 1*st*, The domestic system, under which there is a number of small masters, mostly occupying little farms. 2*d*, Under the master-clothier system of the West of England, where one individual purchases the wool and gives it out to distinct classes of manufacturers to be worked up. 3*d*, Under the factory system, where one individual employs a number of workmen under his own superintendence. Nearly three-fourths of the whole woollen manufacture is located in the West Riding of Yorkshire, where the goods are chiefly sold in an undressed state in public halls in the principal towns. A considerable quantity is also purchased in the different districts by drapers, who give out samples to the manufacturers, and get the cloth sent direct to their warehouses. The woollens of Norfolk and the West of England are generally sold at fairs or markets, or to parties sent round by the drapers.

The annual value of the manufacture in 1698 was estimated at £6,000,000; in 1741, £8,340,000; in 1774, it was, according to Arthur Young, £12,794,877; and in 1800, according to Mr Luccock, £17,500,000. In 1834 it was estimated by Mr Youatt as follows: 108,000,000 lbs. of British wool at 1s. 3d., and 46,535,232 lbs. of imported wool at 2s. 6d., £12,556,904; wages of 350,000 persons at £25 each, £8,750,000; dyes, oils, and other raw materials, £1,450,000; wear and tear of fixed capital, profits, &c., £4,250,000; total, £27,006,904. But, since 1834, a considerable fall has taken place in the price of raw wool.

The sale of woollens was long confined to the home market. And it was not until the beginning of last century that the exports to the continent and to our colonies became of importance. The value of woollens exported was in 1700 nearly £3,000,000; and in 1800 about double that sum. Their value has not since increased; but, owing to the diminished price of wool, and the greater economy in the various manufacturing processes, the quantities have on the whole considerably increased. At present, the most prosperous department of the trade is that in worsted and stuff goods. Of late years, cottons have, from their cheapness, in a great degree superseded the lower qualities of cloths; a circumstance which, joined to the increasing rivalry of France, Germany, and Belgium, renders it improbable, unless new markets shall be opened in China or elsewhere, that much extension will in future be given to our manufacture of woollen cloths.

In 1841, exports consisted of 213,125 pieces cloth; 11,491 pieces napped coatings, duffles, &c.; 22,131 pieces kerseymeres; 37,160 pieces baize; 2,007,368 pieces woollen or worsted stuffs; 1,820,244 yards flannel; 2,187,329 yards blanketing; 809,315 yards carpeting; 5,015,067 yards woollens mixed with cotton; 135,909 dozen pairs stockings; and £163,900 in value of tapes, small wares, &c. The total declared value was £5,748,673; whereof the United States took £1,521,960; Germany, £883,878; Holland, £316,769; Belgium, £110,792; Russia, £102,733; Portugal, £164,251; Italy, £903,797; Gibraltar and Spain, £152,603; India and China; £532,710; Australia, £91,851; British America, £515,344; Brazil, £329,984; Mexico and South American States, £468,070; and the remainder in smaller quantities to different places. The above was exclusive of 4,903,291 lbs. yarn, mostly to Germany.

WORMSEED, the unexpanded flowers and calyxes of a species of *Artemisia*. They are imported from the Levant and Barbary, and are used in medicine.

WORMWOOD, a perennial herb (*Artemisia absinthium*), indigenous to Britain, celebrated for its intensely bitter, tonic, and stimulating qualities.

Y.

YARD, the British standard measure of length. [MEASURES.]

YARN (Fr. *Fil.* Ger. *Garn.* It. *Filato.* Por. *Fio.* Rus. *Prasha.* Sp. *Hilo*), simple spun thread. Its quality is expressed in England by *numbers*, denoting the number of hanks in an avoirdupois pound weight; reckoning the length of the hank of cotton yarn at 840 yards, or 7 leys of 120 yards each. The hank of worsted yarn is sometimes counted in the same way, but more generally at 560 yards, or 7 leys of 80 yards each. Linen yarn is estimated in England by the number of leys or cuts, each of 300 yards, contained in a pound; but in Scotland by the number of pounds in a spindle or 48 leys: thus, No. 48 in England is called 1 lb. yarn in Scotland.

YEAST, OR BARM, a product of the fermentation by which beer is made; upon the surface of which it swims from involving bubbles of carbonic acid gas. It may be obtained in the form of a firm paste. Mixed with moistened flour it excites the panary fermentation, and is thus used for making bread.

Z.

ZAFFRE, an impure oxide of cobalt, prepared by calcining its ores, and mixing the product with about twice its weight of finely powdered flint. It is used for communicating a blue colour to glass, porcelain, and earthenware; and, when roasted with potashes, washed, and pulverized, forms SMALTS. About 2600 cwts. are annually imported from Norway and Germany.

ZEALAND, NEW, a group of islands lying in the Pacific, 1500 miles S. W. Australia. They are subject to Britain; and in 1841 were placed under a governor and council.

There are two principal islands, separated by Cook's Strait—New Ulster and New Munster. The latter, and the greater part of the former, are intersected by a mountain-chain, elevated in some parts 14,000 feet; and there are several subordinate ranges. The country generally is well watered, wooded, and fertile; and the climate salubrious and temperate, resembling that of France. New Ulster alone—the N. island—has been colonized by the British. Auckland, the capital, advantageously situated on its N. W. side, on the Waitemata, in lat. 36° 51′ S., long. 174° 45′ E., is rapidly rising into importance, and has a spacious harbour. Russell, towards the N. E. extremity, on the Bay of Islands, and Wellington, on the S. on Cook's Strait, are the other principal stations. Timber and flax are at present the chief products; but as colonization is progressing rapidly, and the natives evince an aptitude for civilized usages, little doubt can be entertained that these fine islands will become ere long the sites of an extensive commerce.

ZINC, OR SPELTER (Fr. *Zinc.* Ger. *Zink.* It. *Zinco.* Chin. *Pi-yuen*), a metal of a blueish-white colour and lustre. Sp. gr. 7. At common temperatures it is tough and intractable; but heated to between 220° and 320° it becomes malleable and ductile; so that it may be hammered out, rolled into sheets and leaves, and drawn into wire. Being cheap, light, and a metal which, when superficially oxidized, long resists the further action of air and water, it is now employed as a substitute for lead in lining water cisterns and roofing; alloyed with copper it forms brass; and several of its compounds are used in medicine. Zinc is obtained either from *calamine*, a native carbonate, or *blende*, a native sulphuret. Both are found in this country, especially in Flintshire and Derbyshire. But British zinc is inferior to that of Germany, from whence, chiefly by way of Prussia and Hamburg, from 100,000 to 170,000 cwts. are annually imported (commonly as ballast in ships bringing wool); of which about 80,000 cwts. are entered for home consumption, and the rest is re-exported, mostly to India.

TARIFF OF DUTIES

EXIGIBLE IN

THE UNITED KINGDOM.

[N.B.—The Rates shewn below (except those on Spirits) were increased 5 per cent. by the Act 3 & 4 Vict. c. 17.]

I.—CUSTOMS ON IMPORTS.

	Of or from Foreign Countries.		Of and from British Possessions.	
	s.	d.	s.	d.
1. *Animals (living) and Articles of Food.*				
Animals: asses and mules *each*	2	6	1	3
.... goats, kids........ *each*	1	0	0	6
.... oxen, bulls, horses *each*	20	0	10	0
.... cows............... *each*	15	0	7	6
.... calves.............. *each*	10	0	5	0
.... sheep.............. *each*	3	0	1	6
.... lambs, sucking pigs *each*	2	0	1	0
.... swine, hogs....... *each*	5	0	2	6
.... poultry......per £100	(£5)		£2, 10s.)	
Arrow root.............. *cwt.*	5	0	1	0
Capers, dry comfits........ *lb.*	0	6	0	3
Cassava powder.......... *cwt.*	5	0	1	0
Chicory, roasted or ground *lb.*	0	6	0	6
.... raw or kiln dried.. *cwt.*	20	0	20	0
Fish: anchovies.......... *lb.*	0	2	0	0
.... eels...... *ship's lading*	(£13)		0	0
.... lobsters................	Free		Free	
.... turbot............ *cwt.*	5	0	0	0
Fish, foreign, imported in other than fishing vessels.				
.... oysters.......... *bush.*	1	6	0	0
.... salmon............ *cwt.*	10	0	0	0
.... soles, turtle....... *cwt.*	5	0	0	0
.... fresh, unenumerated................ *cwt.*	1	0	0	0
.... cured, unenumerated................ *cwt.*	2	0	0	0
Fish of British taking........	Free		Free	
Fruit, raw, unenum....£100	(£5)		(£5)	
.... almonds.......... *cwt.*	10	0	10	0
.... Jordan....... *cwt.*	25	0	25	0
.... bitter......... *cwt.*	2	0	2	0
.... paste.........£100	(£20)		(£20)	
.... apples, raw...... *bush.*	0	6	0	2
.... dried........ *do.*	2	0	2	0
.... cherries, dried....... *lb.*	0	6	0	6
.... currants.......... *cwt.*	22	2	22	2
.... dates, pistachio nuts *cwt.*	10	0	10	0
.... figs............... *cwt.*	15	0	15	0
.... nuts, small, walnuts, and chesnuts......... *bush.*	2	0	2	0
.... cocoa..............1200	0	0	1	0
.... nuts, unenum.....£100	(£20)		(£20)	
.... olives.............. *gal.*	2	0	2	0
.... oranges, lemons; in boxes not exceed. 5000 cubic inches...... *box*	2	6	2	6
5000 do. to 7300... *box*	3	9	3	9
7300 do. to. 14,000 *box*	7	6	7	6
every additional 1000 cubic inches...... *box*	0	7½	0	7½
.... loose..............1000	15	0	15	0
.... or entered at value £100	(£75)		(£75)	
.... pears, raw........ *bush.*	0	6	0	3
.... dried........ *bush.*	2	0	2	0
.... peel, lemon, &c.... *cwt.*	1	0	1	0
.... plums, prunelloes.. *cwt.*	20	0	20	0

	Of or from Foreign Countries.		Of and from British Possessions.	
	s.	d.	s.	d.
Fruit; plums, dried..... *cwt.*	27	6	27	6
.... prunes............ *cwt.*	7	0	7	0
.... raisins............ *cwt.*	15	0	7	6
Grain: barley, pearled.. *cwt.*	5	0	2	6
.... beans............ *bush.*	0	10	0	5
.... rice, clean........ *cwt.*	6	0	0	6
.... rough, in husk.. *qr.* (See Corn).	7	0	0	1
Hay..................... *load*	16	0	8	0
Honey.................. *cwt.*	10	0	5	0
Hops................... *cwt.*	90	0	90	0
Liquids: ale, beer...... *bar.*	40	0	40	0
.... spruce............ *bar.*	20	0	20	0
.... cider, perry........ *tun*	(L10, 10s.)		(L10, 10s.)	
.... spruce essence....£100	(£10)		(£10)	
.... lemon juice, &c... *gal.*	0	0½	0	0½
.... vinegar........... *tun*	(L.18, 18s.)		(L.18, 18s.)	
Liquorice roots, paste.... *cwt.*	20	0	10	0
.... juice............. *cwt.*	27	6	10	0
.... powder........... *cwt.*	35	0	15	0
Maccaroni, vermicelli..... *lb.*	0	1	0	1
Oil-seed cakes............ *ton*	1	0	1	0
Pickles, including vinegar *gal.*	1	6	0	9
.... in salt............. *gal.*	0	6	0	3
Provisions: bacon, hams *cwt.*	14	0	3	6
.... beef, pork......... *cwt.*	8	0	2	0
.... butter............ *cwt.*	20	0	5	0
.... cheese........... *cwt.*	10	6	2	6
.... eggs...............120	0	10	0	2½
.... lard.............. *cwt.*	2	0	0	6
.... puddings, sausages.. *lb.*	0	3	0	1
.... tongues.......... *cwt.*	10	0	2	6
.... meat, unenum..... *cwt.*	8	0	2	0
Sago and tapioca......... *cwt.*	1	0	1	0
Succades, confectionary... *lb.*	0	6	0	1
Vanelloes................ *lb.*	5	0	5	0
Vegetables, unenum....£100	(£5)		(£2 10s.)	
.... lentiles.......... *bush.*	0	3	0	1½
.... onions........... *bush.*	0	6	0	3
.... potatoes.......... *cwt.*	0	2	0	1
2. *Spices.*				
Cassia lignea.............. *lb.*	0	3	0	1
.... buds, cinnamon .... *lb.*	0	6	0	3
Cloves and pepper........ *lb.*	0	6	0	6
Ginger.................. *cwt.*	10	0	5	0
.... preserved........... *lb.*	0	6	0	1
Mace..................... *lb.*	2	6	2	6
Nutmegs.................. *lb.*	3	6	2	6
.... wild, in shell....... *lb.*	0	3	0	3
Pimento................ *cwt.*	5	0	5	0
3. *Seeds.*				
Anniseed, coriander, cummin, fenugreek, millet, tares, trefoil, worm, grass.... *cwt.*	5	0	2	6
Canary................ *bush.*	4	0	2	0
Clover, caraway, carrot, parsley, quince, tree.... *cwt.*	10	0	5	0
Cole...................... *qr.*	0	1	0	1
Flax, hemp, rape, sesamum *qr.*	0	1	0	1

	Of or from Foreign Countries.		Of and from British Possessions.	
	s.	d.	s.	d.
Leek, onion............cwt.	20	0	10	0
Lucerne, lupines........cwt.	5	0	5	0
Mustard..............bush.	1	3	0	6
Poppy..................qr.	1	0	0	6
Tares...................qr.	5	0	2	6
Seeds, oil and garden, unenumerated............qr.	0	1	0	1
All others.............£100	(£10)		(£5)	
4. *Woods.*				
Brazilwood, brazilleto, barwood, cam, logwood, Nicaragua, red or Guinea wood, sapan, Saunders red....ton	2	0	2	0
Beefwood, lignum vitæ, Santa Maria wood, Saunders yellow, speckled wood, zebra wood, sweet wood......ton	5	0	2	6
Box, cedar, ebony, king, olive, satin, tulip............ton	10	0	2	6
Mahogany, Amboyna wood, blackwood, rosewood...ton	20	0	5	0
N. B. Mahogany and rosewood from Honduras Bay and Musquito shore charged as colonial.				
Walnut wood...........ton	5	0	1	0
5 *Timber.*				
Timber, not being deals, battens, boards, staves, handspikes, oars, lathwood, or other sawn or dressed timber, except hewn, and not otherwise charged,....load	25	0	1	0
Deals, battens, boards, or other timber sawn or split, & not otherwise charged, load	32	0	2	0
Or, in lieu of these duties, the importer has the option of entering foreign battens, batten-ends, boards, deals, deal-ends, and plank by tale, according to their length and width.	28	0	2	0
Staves.................load	10	0	0	3
Knees, under 5 in. square...120	40	0	1	0
.... 5 in. and under 8 in...120				
Lathwood, per fat. of 216 cub ft.	40	0	1	0
Teak,.................load	10	0	1	0
6. *Ores, Minerals, Metals, and Manufactures thereof.*				
Antimony, ore of........ton	1	0	1	0
.... crude............cwt.	2	0	0	6
.... regulus..........cwt.	4	0	1	0
Arsenic...............cwt.	1	0	0	6
Brimstone.............cwt.	0	6	0	3
.... in rolls or flowers..cwt.	2	0	1	0
Bullion....................	Free		Free	
Coals..................ton	1	0	0	6
Cobalt ore.............£100	20	0	20	0
Copper ore, with not above 15 parts of copper.........ton	60	0	20	0
.... not above 20 parts do.ton	90	0	20	0
.... above 20 do.........ton	(£6)		20	0
Copper, old............cwt.	7	6	3	6
.... unwrought.........cwt.	8	9	4	0
.... in part wrought ...cwt.	10	0	5	0
Copper or brass wire....£100	(L.12, 10s.)		(L.12, 10s.)	
Copperas...............ton	20	0	10	0
Crystal, rough..........£100	(£5)		(£2.10s.)	
.... beads.............1000	5	0	5	0
Gold, leaves of..........100	3	0	3	0
Iron, ore of.............ton	2	0	0	6
.... pig, and old iron....ton	5	0	1	0
.... bars, unwrought....ton	20	0	2	6
Iron, chromate of.........ton	5	0	2	6
.... cast, hoops, rods....ton	30	0	15	0
Latten.................cwt.	1	0	0	6
.... wire.............£100	(L.12, 10s.)		(L.12, 10s.)	
Lead, ore of............ton	10	0	2	0
.... black, pig, sheet....ton	20	0	5	0
.... red...............ton	30	0	15	0
.... white.............ton	45	0	22	6
.... chromate of........ton	(£5)		50	0
Litharge................ton	20	0	10	0
Manganese ore...........ton	1	0	1	0
Mercury, prepared.....£100	(£10)		(£10)	
Metal: Bell-metal........ton	40	0	40	0
.... leaf *packet of 250 leaves*	0	1	0	1
Nickel, ore of..........£100	20	0	20	0
.... refined..........£100	(£10)		(£10)	
Ore not specially charged £100	40	0	10	0
Orsedew................cwt.	10	0	10	0
Plate, gold and silver...£100 Together with stamp-duty.	(£10)		(£10)	
Platina, and ore of.....£100	10	0	10	0
Quicksilver..............lb.	0	1	0	1
Spelter, or zinc, crude....ton	1	0	1	0
.... rolled.............ton	50	0	50	0
.... manufactures....£100	(£10)		(£10)	
Steel, unwrought .... { £100	(£15)		....	
ton	....		1	0
Tin, ore and regulus of...ton	50	0	10	0
.... blocks, bars, slabs. cwt.	6	0	3	0
.... foil...............lb.	0	6	0	6
Manufactures of brass, bronze, copper, crystal, iron, steel, lead, pewter, and tin, not otherwise enum.......£100	(£15)		(£15)	
7. *Oils, Extracts, &c.*				
Aquafortis..............cwt.	5	0	5	0
Citric acid...............lb.	0	2	0	2
Essences or extracts not otherwise described......£100	(£20)		(£20)	
Or in importer's option. .lb.	5	0	5	0
Nuts, or kernels thereof, not particularly enumerated, and commonly used for expressing oil therefrom. .tun	1	0	0	6
Oil of almonds, and bays. .lb.	0	2	0	2
.... animal, unenum...cwt.	1	3	1	3
.... castor.............cwt.	1	3	1	3
.... of caraway, lavender, mint, peppermint, or spike lb.	2	0	2	0
.... of cloves...........lb.	4	0	4	0
other essential oils......lb.	1	0	1	0
.... cocoa nut.........cwt.	1	3	0	7½
.... olive and Paran....tun	40	0	20	0
.... olive, imported in Sicilian ship..............tun	80	0	....	
.... palm..............cwt.	0	6	0	6
.... rock and walnut...cwt.	6	0	3	0
.... linseed, hemp, rape, and other seed oil..........tun	(£6)		20	0
.... train, and blubber..tun	(£6)		1	0
.... spermaceti........tun	(£15)		1	0
Oil, or spirit of turpentine cwt.	5	0	2	6
Oil, unenumerated.....£100	(£20)		(£10)	
Orange-flower water......lb.	0	1	0	1
Perfumery, unenum....£100	(£20)		(£20)	
Water, Cologne, per flask....	1	0	1	0
8. *Dye Stuffs, Drugs, &c.*				
Alkali, not being barilla cwt.	1	6	1	6
Aloes....................lb.	0	2	0	1
Alum...................cwt.	2	0	2	0
Amber, rough..........cwt.	5	0	5	0
.... manufactures.....£100	(£15)		(£15)	
Ambergris...............oz.	0	3	0	3
Angelica................cwt.	4	0	4	0
Annatto, alkanetchia....cwt.	1	0	1	0

	Of or from Foreign Countries		Of and from British Possessions.	
	s.	d.	s.	d.
Argol....................*cwt.*	0	6	0	6
Ashes: pearl, pot, soap-weed, wood....................*cwt.*	0	6	Free	
. .. unenumerated....£100	(£5)		Free	
Asphaltum..............*ton*	1	0	1	0
Balsam: Canada..........*lb.*	0	1	0	1
.... Copaiba..........*cwt.*	4	0	4	0
.... Peru...............*lb.*	0	3	0	3
.... Riga...............*lb.*	0	1	0	1
.... & farther as spirits *gall.*	22	6	22	6
.... Tolu...............*lb.*	0	2	0	2
Balsams unenumerated...*lb.*	0	6	0	6
Barilla..................*ton*	5	0	5	0
Bark: Peruvian, &c....*cwt.*	1	0	1	0
.... for tanners or dyers *cwt.*	0	3	0	1
.... extract of, or other vegetable, for tanning ...*cwt.*	1	0	0	1
Berries: bay, juniper, yellow...................*cwt.*	1	0	1	0
.... unenumerated, used in chemical processes......*ton*	1	0	1	0
Boracic acid............*cwt.*	0	6	0	6
Borax, refined..........*cwt.*	5	0	5	0
Camphor................*cwt.*	1	0	1	0
.... refined............*cwt.*	10	0	10	0
Camomile, canella alba...*lb.*	0	1	0	1
Cantharides, China root ..*lb.*	0	3	0	3
Cardamoms..............*lb.*	0	2	0	2
Caoutchouc.............*cwt.*	1	0	1	0
Cassia fistula...........*cwt.*	5	0	5	0
.... buds...............*lb.*	0	6	0	3
Castor..................*cwt.*	2	0	2	0
Civet....................*oz.*	2	0	2	0
Coculus Indicus........*cwt.*	7	6	7	6
Cochineal, granilla, & dust *cwt.*	1	0	1	0
Cubebs, colocynth, pink..*lb.*	0	1	0	1
Cobalt, cutch, divi divi...*ton*	5	0	5	0
Drugs, unenumerated....*cwt.*	1	0	1	0
Fustic..................*ton*	2	0	1	0
Gelatine................*cwt.*	10	0	10	0
Galls, gamboge.........*cwt.*	1	0	1	0
Gentian, ginseng.........*ton*	5	0	5	0
Glue....................*cwt.*	3	0	3	0
.... clippings.........£100	20	0	20	0
Grains, guinea, & paradise *cwt.*	15	0	15	0
Gums of all kinds.......*cwt.*	1	0	1	0
Indigo..................*cwt.*	2	0	1	0
Isinglass...............*cwt.*	47	6	5	0
Jalap, manna............*lb.*	0	1	0	1
Lac; namely, sticklac...*cwt.*	0	1	0	1
Leeches................£100	(£5)		(£5)	
Moss: lichen, rock.......*ton*	5	0	5	0
Madder.................*cwt.*	0	6	0	6
.... root...............*cwt.*	0	3	0	3
Morphia and its salts.....*lb.*	5	0	5	0
Musk....................*oz.*	0	6	0	6
Myrrh..................*cwt.*	1	0	1	0
Nitrates of soda & potash *cwt.*	0	6	0	6
Nux vomica, orris root..*cwt.*	5	0	5	0
Ochre..................*cwt.*	0	6	0	6
Opium...................*lb.*	1	0	1	0
Olibanum, orchil, orpiment.................*cwt.*	1	0	1	0
Paints, unenumerated: manufactured £100	(£10)		(£10)	
.... unmanufactured £100	20	0	20	0
Pitch, Burgundy........*cwt.*	2	0	2	0
Quassia................*cwt.*	10	0	10	0
Quinine, sulphate of......*oz.*	0	6	0	6
Radix: rhataniæ, senekæ *lb.*	0	1	0	1
.... ipecacuanhæ........*lb.*	1	0	1	0
.... serpentariæ........*lb.*	0	2	0	2
Rhubarb.................*lb.*	0	3	0	3
Saffron..................*lb.*	1	0	1	0
Sal: ammoniac, limomum, prunella, and salep....*cwt.*	1	0	1	0

	Of or from Foreign Countries.		Of and from British Possessions.	
	s.	d.	s.	d.
Saltpetre, sassafras......*cwt.*	0	6	0	6
Sanguis draconis.........*cwt.*	4	0	4	0
Sarsaparilla, senna........*lb.*	0	1	0	1
Scammony...............*lb.*	0	6	0	6
Smalts...................*lb.*	0	2	0	2
Squills, dried...........*cwt.*	1	0	1	0
.... not dried..........*cwt.*	0	6	0	6
Sumach.................*ton*	1	0	1	0
Tartaric acid............*lb.*	0	1	0	1
Terrajaponica, terra verde *ton*	5	0	5	0
Tincal..................*ton*	1	0	0	6
Turmeric................*ton*	5	0	0	1
Turpentine, Venice ......*lb.*	0	10	0	10
Valonia..................*ton*	5	0	5	0
Varnish, unenumerated £100	(£15)		(£15)	
Verdegris...............*lb.*	0	1	0	1
Vermilion...............*lb.*	0	3	0	3
Wax, bees, or myrtle....*cwt.*	2	0	1	0
.... bees, anywise bleached	20	0	10	0
.... sealing............£100	(£15)		(£15)	
Zaffre..................*cwt.*	1	0	1	0
9. *Skins and Furs.*				
Beaver, undressed......*skin*	0	8	0	2
Goat, undressed......12 *skins*	0	3	0	2
.... any way dressed 12 *skins*	5	0	2	6
Kid or lamb, undressed 100 *do.*	0	4	0	2
.... dressed............*do.*	5	0	2	6
.... do. and coloured...*do.*	10	0	5	0
Lamb dressed in oil.......*do.*	40	0	20	0
Musquash, nutria; undressed...........100 *skins*	1	0	0	6
Seal, in the hair.........*skin*	0	4	0	4
.... of British taking from fishery or colony.. 12 *skins*	0	0	0	1
Sheep undressed in the wool *do.*	0	6	0	3
.... tanned or tawed....100	12	0	6	0
.... dressed in oil......100	20	0	10	0
Skins and furs, or pieces, undressed, and unenum. £100	(£5)		50	0
.... any way dressed. .£100	(£10)		(£5)	
Manufactures thereof...£100	(£20)		(£10)	
10. *Hides.*				
Horse, ox, buffalo, calf, hog, sea-cow: dry..........*cwt.*	0	6	0	2
.... wet..........*cwt.*	0	3	0	1
.... whether whole, or in pieces, not cut in shapes, tanned but not dressed..*lb.*	0	2	0	1
.... in any way dressed, but not varnished, japanned, or enamelled..............*lb.*	0	4	0	2
.... if varnished, &c....*lb.*	0	6	0	3
Losh hides; russia hides or pieces, any way dressed..*lb.*	0	4	0	2
Hides or pieces, undressed, unenumerated........£100	(£5)		50	0
.... anyway dressed do. £100	(£10)		(£5)	
11. *Leather Manufactures.*				
Women's boots......12 *pairs*	12	0	12	0
.... furred or trimmed...*do.*	15	0	15	0
Women's shoes, with cork or double soles, quilted shoes and clogs..........12 *pairs*	10	0	10	0
.... if furred or trimmed *do.*	12	0	12	0
.... of silk, jean, or other stuff, kid, or other leather *do.*	9	0	9	0
Women's shoes, if furred or trimmed..........12 *pairs*	10	0	10	0
Girls' boots, shoes, and calashes, not exceeding 7 in. in length, charged ½d				
Men's boots..........12 *pairs*	28	0	28	0
.... shoes..........12 *pairs*	14	0	14	0

	Of or from Foreign Countries.		Of and from British Possessions.	
	s.	d.	s.	d.
Boys' boots and shoes, not exceeding 7 in. in length, charged ⅔d duties.				
Boot fronts, not exceeding 9 in. in height.......12 *pairs*	3	6	3	6
.... exceeding 9 inches...*do.*	5	6	5	6
Leather, shaped or manufactured, or any article whereof leather is the most valuable part, not otherwise enumerated...........£100	(£15)		(£15)	
Gloves: habit mitts..12 *pairs*	2	4	2	4
.... habit gloves & men's *do.*	3	6	3	6
.... women's or mitts...*do.*	4	6	4	6
Parchment..........12 *sheets*	6	0	6	0
Vellum..................*skin*	1	0	1	0
12. *Cotton, Hair, Linen, Wool, and Manufactures thereof.*				
Bandstring twist, the 12 knots each of 32 yards..........	5	0	2	6
Candlewick..............*cwt.*	8	8	4	4
Cotton manufactures....£100	(£10)		(£5)	
.... articles any way made up, unenumerated....£100	(£20)		(£10)	
Flax, tow, or codilla.....*cwt.*	0	1	0	1
Gauze, of thread.......£100	(£15)		(£7,10s.)	
Hair, camels, & hares' wool *lb.*	0	1	Free.	
.... ox, horse, elk......*cwt.*	0	6	0	3
.... unenumerated....£100	(£5)		50	0
.... manufactures of hair or goats' wool, alone, or mixed with other material; and such articles made up, not otherwise charged....£100	(£15)		(£7,10s.)	
Inkle, unwrought.........*lb.*	0	6	0	3
.... wrought............*lb.*	1	0	0	6
Linen, or linen and cotton: Cambrics and French lawns, the piece, not ex. 8 yards in length and ⅞ths broad				
.... plain; also bordered handkerchiefs.........*piece*	5	0	5	0
.... any other lawns..£100	(£15)		(£15)	
.... lace thread; and pillow lace of linen, cotton, or silk..............£100	(L.12, 10s.)		(L.12, 10s.)	
.... damasks.........*sq. yd.*	0	10	0	10
.... damask diaper..*sq. yd.*	0	5	0	5
.... plain linen and diaper, & sails, unenumerated £100	(£15)		(£15)	
.... sails in use by a British vessel, and not otherwise disposed of...............	Free		Free	
.... sails if and when otherwise disposed of......£100	(£15)		(£15)	
.... manufactures, or of linen mixed with cotton or wool, unenumerated..£100	(£15)		(£15)	
Thread unenumerated..£100	(£10)		(£5)	
Wool: alpaca and llama *cwt.*	2	6	2	6
.... beaver..............*lb.*	0	6	0	3
.... cut and combed.....*lb.*	1	0	0	6
.... coney..............*lb.*	0	1	0	1
.... cotton, or waste...*cwt.*	2	11	0	4
.... goats or hair......*cwt.*	2	6	Free	
.... sheep or lambs, under 1s. per lb. value.........*lb.*	0	0½	Free.	
.... in value 1s. per lb. or upwards................*lb.*	0	1	Free.	
Woollen manufactures (not of goats' wool, or of wool mixed with cotton, and not otherwise charged....£100	(£15)		(£5)	
.... do. do., articles any way made up........£100	(£20)		(£10)	

	Of or from Foreign Countries.		Of and from British Possessions.	
	s.	d.	s.	d.
13. *Glass, Earthenware, &c.*				
Beads and bugles of glass...*lb.*	0	3	0	3
Bottles, earth or stone, empty 12	0	2	0	2
Bottles, glass (not flint or cut) wickered, or of green or common glass.........*cwt.*	4	0	4	0
And further for excise..*cwt.*	7	0	7	0
.... glass, unenumerated *cwt.*	20	0	20	0
And for excise duty....*cwt.*	20	0	20	0
China: plain............£100	(£15)		(£15)	
.... ornamented......£100	(£20)		(£20)	
Earthenware, unenum..£100	(£10)		(£10)	
Enamel..................*lb.*	2	0	2	0
Glass: crown or window, not ex. ⅛th inch thick..........*cwt.*	30	0	30	0
And for excise..........*cwt.*	(£5, 3s.)		(£5, 3s.)	
.... flint and cut.........£100	(£30)		(£30)	
And for excise..........*cwt.*	20	0	20	0
.... German sheet, not ex. ⅛th inch thick..........*cwt.*	30	0	30	0
And for excise..........*cwt.*	84	0	84	0
.... all glass ex. ⅛th inch thick; all silvered or polished glass, and plate-glass; not containing above 9 sq. feet................*sq. foot*	4	0	4	0
From 9 to 14 do. ...*sq. foot*	5	0	5	0
From 14 to 36 do...*sq. foot*	6	0	6	0
Above 36 square feet *sq. foot*	7	0	7	0
.... manufactures unenumerated, and old broken glass.................*cwt.*	20	0	20	0
And for excise........*cwt.*	20	0	20	0
Paintings on glass......£100	(£5)		(£5)	
And for excise.....*sq. foot*	4	0	4	0
14. *Silks, &c.*				
Silk: knubs, husks, and waste..................*cwt.*	1	0	0	6
.... raw..................*lb.*	0	1	0	1
.... thrown, undyed: viz., singles, tram, organzine, and crape silk...............*lb.*	1	0	0	6
.... do., dyed, do........*lb.*	2	0	1	0
manufactures, or of silk mixed with other material, the produce of Europe, viz.:				
plain silk or satin........*lb.*	11	0	....	
or at option of Customs £100	(£25)		....	
*figured or brocaded silk *lb.*	15	0	....	
*plain gauze............*lb.*	17	0	....	
*gauze striped, figured, or brocaded...............*lb.*	27	6	....	
*plain crape............*lb.*	16	0	....	
*figured crape...........*lb.*	18	0	....	
*plain velvet............*lb.*	22	0	....	
*figured velvet..........*lb.*	27	6	....	
*ribbons embossed or figured with velvet....*lb.*	17	0	....	
*or in Customs' option £100	(£30)		....	
and further, if mixed with gold, silver, or other metal, when the duty is not charged *ad valorem*...*lb.*	10	0	....	
.... fancy net or tricot ...*lb.*	24	0	....	
.... tulle............*sq. yard*	1	4	....	
.... manufactures, or of silk mixed with other materials, unenumerated........£100	(£30)		(£5)	
.... millinery, or of which the greater part is silk, viz., turbans or caps.........*each*	15	0	15	0
hats or bonnets.........*each*	25	0	25	0
dresses.................*each*	50	0	50	0
or, in Customs' option £100	(£40)		(£40)	

	Of or from Foreign Countries.		Of and from British Possessions.	
	s.	d.	s.	d.
Silk manufactures, or of silk and any other material, wholly or partly made up, not otherwise charged £100	(£30)		(£30)	
Silkworm gut..........£100	(£20)		(£20)	
15. *Naval Stores.*				
Bast ropes, twines, &c..*cwt.*	5	0	2	6
Cables (not iron), cordage *cwt.*	6	0	3	0
.... do. in use of Brit. ship, and until otherwise disposed of......................	Free		Free	
.... when otherwise disposed of................£100	(£10)		(£	
Cordage, do............£100	(£5)		(£2,10s.)	
Coir rope, twine, &c.....*cwt.*	2	6	1	3
Hemp, dressed..........*cwt.*	4	0	2	0
.... or other similar material, undressed........*cwt.*	0	1	0	1
Pitch..................*cwt.*	0	6	0	1
Rosin..................*cwt.*	2	0	1	0
Ships to be broken up, with tackle, &c. (except sails), viz.				
foreign ships........£100	(£25)		(£25)	
do. broken up......£100	(£10)		(£10)	
.... British, or vessels entitled to registry as such....	....		Free	
Tar, the last of 12 barrels, each not exceeding 31½ gallons..	2	6	0	6
Turpentine, value not above 9s. per cwt...........*cwt.*	0	1	0	1
.... from 9s. to 15s. do. *cwt.*	1	0	0	3
.... above 15s. do......*cwt.*	5	0	2	6
Twine.................*cwt.*	10	0	5	0
Yarn, cable yarn........*cwt.*	6	0	3	0
16. *Stones, Bricks, Tiles.*				
Bricks (Dutch)..........1000	10	0	5	0
.... other sorts.........1000	15	0	7	6
Chalk, unmanufactured £100	(£5)		(£2 10s.)	
.... manufactured, not otherwise charged....£100	(£10)		(£5)	
Gypsum................*ton*	31	8	1	3
Plaster of Paris..........*ton*	20	0	20	0
Stone in lumps, unhewn, rough marble, limestone, flint, stones for potters, pebble, stone for lithography	Free		Free	
Stone in blocks, shaped, or rough scalped..........*ton*	2	0	0	6
Stone and slate, hewn....*ton*	10	0	1	0
Marble, manufactured...*cwt.*	3	0	1	6
Tiles..................£100	(£10)		(£5)	
17. *Coffee, Cocoa, Tea, Tobacco.*				
Coffee....................*lb.*	0	8	0	4
Cocoa.....................*lb.*	0	4	0	1
.... husks and shells.....*lb.*	0	1	0	0½
.... paste, chocolate.....*lb.*	0	6	0	2
Tea.......................*lb.*	2	1	2	1
Tobacco, unmanufactured *lb.*	3	0	3	0
.... snuff...............*lb.*	6	0	6	0
.... manufactured or cigars..................*lb.*	9	0	9	0
.... stalks and flour of, prohibited.				
18. *Spirits, Sugar, and Wine.*				
Spirits: per gallon of proof strength by Sykes' hydrometer, and proportionally for greater or less strength.	22	6	9	0
.... Rum: the produce of any British possession within the limits of the E. I. Co.'s charter, in regard to which the conditions of 4 Vict. c. 8, have been fulfilled..*gall.*	....		9	0
Sugar..................*cwt.*	63	0	24	0
.... the produce of and imported from any Brit. Poss. within the limits of E. I. Co.'s Charter, into which the importation of foreign sugar is prohibited..........*cwt.*	....		24	0
.... do. do. from any other B. P. within those limits *cwt.*	....		32	0
Wine..................*gall.*	5	6	2	9
19. *Miscellaneous.*				
Agates or carnelians. ..£100	(£5)		(£5)	
.... set..............£100	(£15)		(£15)	
Barbadoes tar..........*cwt.*	2	6	2	6
Basket rods, peeled, the bundle not ex. 3 feet in circumference....................	0	6	0	6
.... unpeeled, do..........	0	3	0	3
Baskets................£100	(£10)		(£10)	
Beads..................£100	(£15)		(£15)	
Books: print^{d}. before 1801 *cwt.*	20	0	20	0
.... do. in or since 1801 *cwt.*	(£5)		(£5)	
.... do. do. in foreign living languages.............*cwt.*	50	0	50	0
Bones, animal, burnt or not *ton*	0	6	0	6
Boxes (without glass)...£100	(£10)		(£5)	
Bristles, rough..........*cwt.*	2	6	2	6
.... any way sorted......*lb.*	0	3	0	3
Candles: spermaceti......*lb.*	0	6	0	6
.... stearine............*lb.*	0	2½	0	2½
.... tallow............*cwt.*	10	0	10	0
.... wax.................*lb.*	0	4	0	4
Canes: bamboo.........1000	0	6	0	6
.... or sticks, unenum. 1000	5	0	5	0
.... mounted....£100	(£20)		(£20)	
Carriages..............£100	(£20)		(£20)	
Casks, empty..........£100	(£25)		(£25)	
Catlings........12 *doz. knots*	3	0	3	0
Clocks.................£100	(£20)		(£20)	
Cork (after July 5, 1843)..*ton*	1	0	1	0
Corks, ready made (do)....*lb.*	0	8	0	8
.. squared for rounding *cwt.*	16	0	16	0
.... fishermen's........*cwt.*	2	0	2	0
Coral in fragments........*lb.*	0	2	0	1
.... whole, polished.....*lb.*	12	0	0	6
.... unpolished..........*lb.*	5	6	0	6
Crayons...............£100	(£15)		(£15)	
Diamonds.................	Free		Free	
Down.....................*lb.*	1	3	0	7½
Feathers, bed..........*cwt.*	20	0	10	0
.... ostrich, dressed.....*lb.*	30	0	30	0
.... undressed...*lb.*	0	1	0	1
.... unenum., dressed £100	(£10)		(£10)	
.... undressed....£100	(£5)		(£5)	
.... paddy bird..........*lb.*	1	0	1	0
Flowers, artificial, not silk £100	(£25)		(£25)	
Grease.................*cwt.*	1	8	0	3
Gunpowder.............*cwt.*	20	0	20	0
Guano..................*ton*	1	0	1	0
Hats or bonnets: chip.....*lb.*	5	0	5	0
.... bast, cane, or horsehair, each not ex. 22 inches diameter...............12	10	0	10	0
.... ex. 22 inches....12	15	0	15	0
.... straw...............*lb.*	8	6	8	6
.... felt, hair, wool, or beaver...............*each*	2	6	2	6
.... silk, or silk shag on felt or other material......*each*	3	6	3	6
Horns, tips, or pieces....*ton*	1	0	1	0
Japanned ware.........£100	(£15)		(£15)	
Jet.......................*lb.*	0	1	0	1

	Of or from Foreign Countries. s. d.	Of and from British Possessions. s. d.
Jewels (except diamonds and pearls), unset........£100	10 0	10 0
.... ditto, set..........£100	(£10)	(£10)
Ink for printers..........*cwt.*	10 0	10 0
Lamp-black.............*cwt.*	20 0	20 0
Maps or charts..........*each*	0 1	0 1
Mats, matting...........£100	(£5)	(£2,10s.)
Mattresses.............£100	(£10)	(£10)
Mother-of-pearl.........£100	(£5)	(£5)
Musical instruments....£100	(£15)	(£15)
Mustard flour...........*cwt.*	12 0	12 0
Paper, brown.............*lb.*	0 3	0 3
.... hangings........*sq. yd.*	1 0	1 0
.... waste..............*lb.*	0 4½	0 4½
.... printed in English (prohibited).		
Pasteboards. ....*cwt.*	30 0	30 0
Pencils,pens,slate-pencils£100	(£15)	(£15)
Pictures...............*each*	1 0	1 0
And further........*sq. foot*	1 0	1 0
Above 200 sq. feet.....*each*	(£10)	(£10)
Plants and trees, alive.......	Free	Free
Platting for hat-making; bast, cane, or horse-hair......*lb.*	10 0	10 0
.... chip................*lb.*	2 6	2 6
.... straw...............*lb.*	7 6	7 6
Prints or drawings, single *each*	0 1	0 1
.... sewn..............12	0 3	0 3
Quills, goose............1000	0 6	0 3
.... swan..............1000	3 0	1 6
Rags....................*ton*	0 6	0 6
.... pulp...............*ton*	5 0	5 0
Salt.......................	Free	Free
Soap, hard.............*cwt.*	30 0	20 0
.... soft..............*cwt.*	20 0	15 0
.... Naples...........*cwt.*	56 0	56 0
Spermaceti, fine........£100	(£25)	(£25)
Sponge...................*lb.*	0 6	0 1
Starch..................*cwt.*	10 0	5 0
.... gum, or British gum *cwt.*	15 0	15 0
Straw for platting.......*cwt.*	0 1	0 1
Tallow..................*cwt.*	3 2	0 3
Teeth, elephants, &c.....*cwt.*	1 0	1 0
Tobacco-pipes, clay....£100	(£15)	(£15)
Tortoise-shell............*lb.*	1 0	0 1
Toys (except mirrors)..£100	(£10)	(£10)
Turnery, unenumerated £100	(£15)	(£15)
Wafers...................*lb.*	0 3	0 3
Washing-balls............*lb.*	0 6	0 6
Watches..............£100	(£10)	(£10)
Whale-fins, British taking *ton*	....	20 0
.... otherwise taken..£100	(£20)	(£20)
Goods, any way manufactured, unenumerated, and not prohibited...........£100	(£20)	(£20)
Ditto, not in any way manufactured, do. do. do........	(£5)	(£5)

II. CUSTOMS ON EXPORTS,

The Produce of the United Kingdom.

	s. d.
Coal in a foreign ship.............*ton*	4 0
.... in a British ship, viz. not small coal.........................*ton*	2 0
Small coal, *i. e.* coal screened through a riddle, with bars not more than ⅝ inch asunder, and culm.........*ton*	1 0
Clay and china stone ....*cwt.*	0 3
Cement, stone and flint (except ballast)..........................*cwt.*	0 6
Wools and skins..................*cwt.*	1 0

III. INLAND EXCISE DUTIES.

	Britain. s. d.	Ireland. s. d.
Bricks, every 1000, of a size not exceeding 150 cubic inches	5 10	....
Every 1000 exceeding do...	10 0	....
Glass, bottle............*cwt.*	7 0	7 0
.... broad, crown, and German sheet.............*cwt.*	73 6	73 6
.... plate, for material employed in making it....*cwt.*	60 0	60 0
.... flint, charged in fluxed material............100 *lbs.*	6 8	6 8
Hops.....................*lb.*	0 2	....
Malt from barley.......*bush.*	2 7	2 7
.... bear or bigg in Scotland and Ireland, do.......	2 0	2 0
Paper or pasteboard......*lb.*	0 1½	0 1½
[See Article Paper.]		
Soap, hard...............*lb.*	0 1½	....
.... soft................*lb.*	0 1	....
Spirits in England......*gall.*	7 10	....
.... Scotland & Ireland *gall.*	3 8	3 8
Vinegar................*gall.*	0 2	0 2

N.B.—Bricks, hops, soap, and spirits are subjected, on importation from Ireland to Britain, to *countervailing duties* equivalent to the excise duties levied in Britain, or their excess above those of Ireland.

IV. CUSTOMS & EXCISE DRAWBACKS ON EXPORTATION.

	s. d.
Beer brewed in United Kingdom *barrel*	5 0
Glass, bottle....................*cwt.*	7 0
.... broad, German sheet, and crown, in shades, tables, ½ tables, or ¼ tables........................*cwt.*	73 6
.... broad, in panes cut into rectangular figures not less than 6 inches by 4 inches...................*cwt.*	35 0
.... German sheet, in panes, do. do..........................*cwt.*	80 0
.... crown, in panes, do. do., such panes not containing any portion of the bullion or thick centre of the tables from which they have been cut..........................*cwt.*	98 0
.... plate.................*sq. foot*	2 9
.... flint..................100 *lbs.*	18 9
Plate. [See Article Plate.]	
N. B.—The other excise drawbacks consist simply of the duties paid.	
Rice, cleaned in U. K.; a drawback per cwt. equal to duty on 4 bushels rough rice or paddee.	
Sugar, refined in loaf, complete and whole, or lumps duly refined, having been perfectly clarified and thoroughly dried in the stove, and being of a uniform whiteness throughout; or such sugar pounded, crushed, or broken; also for sugar-candy:—if exported in a British ship......*cwt.*	30 8
.... in a foreign ship..........*cwt.*	29 2
And for every cwt. of double refined, or of sugar equal in quality thereto, an additional sum of...............	5 0
Tobacco, manufactured in U. K., at or within 2 miles of any port into which tobacco may be imported, made into shag, roll, or carrot, upon shipment thereof as stores, or for exportation........................*lb.*	2 7½

SUPPLEMENT.

BANK. On June 21, 1841, an act was passed (4 & 5 Vict. c. 50), making further provision relative to the returns of the circulation.

§ 1. Banks of issue are to make up an account of their notes in circulation at the end of every week, and at the end of every four weeks are to make up therefrom an average of their circulation during the previous four weeks, to be delivered within seven days to the Commissioners of Stamps: penalty for omission, £50.

§ 2. Return to be verified by bank officer.

§ 3. From these returns an account is to be made up, and published in the Gazette, of the average circulation of notes in the United Kingdom every four weeks, distinguishing that of the Bank of England, English private and joint-stock banks, banks in Scotland, Bank of Ireland and other Irish banks; and likewise stating the amount of bullion in the Bank of England.

BANKRUPTCY.—On August 12, 1842, an act was passed, applicable to England solely, "for the Amendment of the Law of Bankruptcy" (5 & 6 Vict. c. 122). The matters in which it supersedes the law as explained under the heads BANKRUPTCY, ASSIGNEES, &c., are the following:—the chancellor may dispense with the petitioning creditor's bond, in issuing the fiat (§ 3). If the petitioning creditor do not open the fiat within three days after it has been transmitted to the proper court, another qualified creditor may open it within 14 days thereafter (§ 4). Where a person is about to leave the country, warrant may be issued to arrest his person or goods (§ 5). No one is liable to be made bankrupt on act of bankruptcy more than 12 months old (§ 7). Concerted acts of bankruptcy are not to annul fiats (§ 8). The qualifications for petitioning creditors are to be—for one, £50; for two, £70; for three or more, £100. A future debt is a sufficient qualification (§ 9). The list of persons specially liable to become bankrupts is added to as follows:—Livery stable keepers, coach proprietors, carriers, shipowners, auctioneers, apothecaries, market-gardeners, cow-keepers, brick-makers, alum-makers, lime-burners, and millers (§ 10). There are provisions for bringing the debtor before the court, anterior to adjudication, to answer as to the debt. The trader has to admit the demand, or to declare that he has a good defence against it, being in the former case allowed 14 days to satisfy it; and on the 15th, on failure, he is considered to have committed an act of bankruptcy (§ 11-16). An admission signed by the trader, though not in court, may be received as admission, provided it be countersigned by an attorney who has been called in to explain to the trader the effects of his admission (§ 17). An act of bankruptcy is committed by the not satisfying judgment debts, or orders of courts of equity for paying money, within 14 days (§§ 20, 21). Before notification, a person adjudged against is allowed five days to show cause against the adjudication (§ 23). The court may audit the assignee's accounts, and declare a dividend whenever it may think fit, at or after the sitting appointed for the last examination (§ 27). The court may order arrears of wages to any clerk or servant of the bankrupt, limited (alternatively) to three months' wages, and £30: and a workman in the bankrupt's employment may be paid a sum not exceeding 40s. (§§ 29, 30). If the bankrupt do not appear before three o'clock of the day appointed, and make a proper surrender, he is liable to be transported for upwards of seven years; and the same punishment is awarded for concealment of accounts and papers, or of property, to the amount of more than £10 (§ 32). A bankrupt who has falsified books or papers is liable to imprisonment not exceeding three years (§ 36). A bankrupt who, within three months of his bankruptcy, has obtained goods on credit "under the false colour and pretence of carrying on business and dealing in the ordinary course of trade," or who conceals or removes goods with a fraudulent intent, knowing them to have been so obtained, is liable to imprisonment not exceeding two years (§ 36). A certificate does not require to be signed by creditors: no certificate is a discharge unless it certify that the bankrupt has conformed (§ 39). Contracts with creditors, in consideration of their not opposing a certificate, are void; and creditors accepting property on such consideration forfeit double its value (§§ 40, 41). The bankrupt's allowance is not payable till 12 months after the date of the fiat. If the dividends do not amount to 10s. per £1, the court may award an allowance not exceeding £3 per cent. and £300 (§ 44). The most material feature in the act is the extension of the Metropolitan Court of Bankruptcy to the country, through the appointment of additional commissioners and official assignees. [ASSIGNEES. BANKRUPTCY, COURT OF. COMMISSIONERS.] The number of additional official assignees is not to exceed 30; and they are to have the same rights and duties as those in town bankruptcies. The additional commissioners are not to exceed 12 in number. The Court of Review may consist of one judge (§§ 46-63, 64). The process before a country commissioner is considered as in the Court of Bankruptcy, where it is filed and preserved (§ 47). The sums to be paid to auctioneers, accountants, &c., to be fixed by the court in which the bankruptcy proceeds (§ 83).

BREMEN. The import duty on goods entering seaward is ⅛ per cent., instead of ⅜ per cent., as stated on page 112.

CHINA. The success of her Majesty's arms led to a treaty of peace, August 29, 1842; the Chinese consenting to all the British demands, the payment by four instalments of $21,000,000 (about £4,375,000), the entire cession of Hong-Kong, and freedom of trade at 5 ports.

HONG-KONG is the most northerly of a group of islands at the mouth of the estuary leading to Canton, from which it is distant about 100 miles, and from Macao 40. It is eight miles in length, and about two in breadth; and lies in lat. 22° 12′ N., long. 114° 13′ E. The bay between it and the main land, from one to six miles broad, is deep and spacious, with secure anchorage for shipping, especially as respects the typhoon, the great scourge of those seas. On the whole, the island has few equals as a naval station; and it abounds with materials for building. In other respects it has few advantages; being rocky, barren, and rather insalubrious. Fresh water, however, is plentiful, and provisions can be readily procured from the adjoining country.

THE FIVE PORTS, stated in their order from N. to S., are the following:—

Shang-hai, a celebrated port of the province of Kiang-nan, advantageously situated in one of the most fertile districts of China, not far from Nan-king, the ancient capital of the empire. It lies on the banks of a navigable stream, adjoining the estuary of the mighty Yang-tse-kiang, the largest river in Asia.

Ning-po, the flourishing emporium of the province of Tche-kiang, lies in lat. 30° 10′ N., long. 120° 30′ E., about 100 miles S. from Shang-hai, from which it is separated by a bay, having at its water-side the well-known island of Chu-san. The city is situated about 14 miles up the river Ta-hae, at the mouth of which, contiguous to Chin-hae, there is anchorage for shipping of any size. A little to its N. lies Cha-poo, the principal seat of the trade with Japan.

Fou-tcheou, the capital of the province of Fo-kien, lies on the Min-kiang, a river navigable for the largest ships to within 10 miles of the town; and which, running through the centre of the principal tea district, will enable produce to be brought to Fou-tcheou at a much cheaper rate than overland to Canton.

Amoy, situated in lat. 24° 20′ N., long. 118° 16′ E., on a barren part of the coast of Fo-kien; but it is the emporium of the trade with the large island of Formosa, the granary of the E. coast of China, from which it is distant only 150 miles. Amoy is besides, next to Canton, the chief seat of the foreign commerce of the empire; being the residence of numerous wealthy merchants who trade with Singapore, Bankok, Manilla, the Eastern Islands, and Japan.

Canton, described in the body of the work.

COACH, CARRIAGE. The act 5 & 6 Vict. c. 79, substitutes for the duties on stage-carriages, enumerated on page 159, the following:—namely,—for every original license to be taken out, for each carriage, yearly, £3, 3s.; for every supplementary license for the same carriage, 5s.; and in respect of every mile which any stage-carriage shall be licensed to travel, 1½d. And for passengers conveyed by railway, 5 per cent.

No stage-coach to carry more passengers than it is constructed for, each being allowed 16 inches measured off on the front of the seat. Children under 5 years of age, in the lap, not to be counted. The number of passengers which the coach is licensed for (distinguishing outside from inside), to be painted on the back, and on the inside of each compartment. Limitation of proportion of outside to the whole number of passengers in coaches more than 8 feet 9 inches high, and with a space less than 4 feet 6 inches between the track of the wheels, viz.—where 9 passengers, 5 outside; where 12, 8 ditto; where 15, 11 ditto; where 18, 12 ditto. Thereafter, 2 outsides for every 3 additional passengers.

The 5 & 6 Vict. c. 80, alters the duties on carriages for hire to £6 for each carriage.

COFFEE. The absurd arrangement of the coffee duties pointed out on page 168 has been remedied in the new tariff.

COIN. By proclamation, June 7, 1842, the sovereign of 5 dwts. 2½ grains, and the half-sovereign of 2 dwts. 13¼ grains, are allowed currency.

COLONY. Several of the statutory regulations narrated under this head have been altered by the act 5 & 6 Vict. c. 49, passed July 16, 1842, of which the following is an abstract:—

§ 1. Act to take effect in the colonies in S. America and the West Indies, from 5th April, and in British N. America and Mauritius, from 5th July 1843, except as after provided.

§ 2. Repeals the whole table of duties shown in a note on page 177.

§ 3. Repeals the "Table of Prohibitions and Restrictions" on page 176.

§ 4. Enacts in its stead the following table, applicable to importations into the British possessions in America or Mauritius:—

New Table of Prohibitions and Restrictions.

Gunpowder, ammunitions, arms, or utensils of war, prohibited, except from the United Kingdom, or from some other British Possession.

Coffee, sugar, not being refined, in bond in the U. K., molasses, rum, being the produce of any B. P. within the limits of the E. I. Co.'s charter, except as after provided, or being of foreign produce, prohibited to be imported into any of the B. P. in S. America, or West Indies (the Bahamas and Bermudas not included), or into Mauritius, except to be warehoused for exportation only, and may also be prohibited to be imported into the Bahamas or Bermudas.

Base or counterfeit coin, and books, such as are prohibited to be imported into the U. K.

All goods imported contrary thereto forfeited; also the vessel, if of less burden than 70 tons.

§ 5. But it shall be lawful to import into any B. P. in the W. Indies and S. America, and into Mauritius, coffee the produce of any B. P. within the limits of the E. I. Co.'s charter; and also sugar, the produce of any B. P. within such limits, into which the importation of sugar the produce of any foreign country, or of any B. P. into which foreign sugar may be legally imported, has been prohibited; and also rum the produce of any B. P. within the limits of the E. I. Co.'s charter into which the importation of rum the produce of any foreign country, or of any B. P. into which foreign sugar or rum may be legally imported, has been prohibited: Provided that no such coffee, sugar, or rum, shall be entered in any B. P. in the W. Indies or S. America, or Mauritius, as being the produce of any B. P. within the limits of the E. I. Co.'s charter from which the same may be legally imported, under the proviso last aforesaid, unless the master of the ship importing the same shall have delivered to the customs at the port of importation a certificate of origin, and make declaration thereto in the form prescribed.

§ 6. Repeals table of duties on pages 176, 177.

§ 7. The following duties to be exacted upon goods not the production of the U. K., or of any B. P. in America, of Mauritius, of any B. P. within the limits of the E. I. Co.'s charter, or the produce of any of the British fisheries, imported or brought into any of the B. P. in America or the Mauritius, by sea or inland carriage.

New Table of Duties.

		s.	d.
Wheat flour . .	*Barrel of* 196 *lbs.*	2	0
Fish of foreign taking or curing .	*cwt.*	2	0
Ditto, pickled . . .	*barrel*	4	0
Meat, salted or cured	*cwt.*	3	0
Butter	*cwt.*	8	0
Coffee and cheese	*cwt.*	5	0
Cocoa	*cwt.*	1	0
Molasses	*cwt.*	3	0
Tea, unless imported from China, the U. K., or a B. P. . . .	*lb.*	0	1
Spirits: Rum	*gall.*	0	6
Other spirits and cordials . .	*gall.*	1	0
Sugar, unrefined	*cwt.*	5	0

Refined sugar, the produce of and refined in foreign countries, 20 *per centum ad valorem.*

Glass and silks, and spermaceti, 15 *per centum.*

Wine, whether bottled or not; cotton, linen, woollen, leather, and paper manufactures; hardware, clocks and watches, manufactured tobacco, soap, candles other than spermaceti, corks, cordage, and oakum, 7 *per centum.*

Oil, blubber, fins, and skins, of foreign fishing, 15 *per centum.*

Articles not enumerated, except such as are comprised or referred to in the subjoined table of exemptions, 4 *per centum.*

And if any of the goods herein-before proposed to be charged with duty, except sugar and tea, shall be imported through the U. K. (having been exported from the warehouse or the duties drawn back), such goods shall only be charged with ⅘ths of the above duties.

Exemptions.—Coin, bullion, and diamonds;

horses, cattle, and all other live-stock; hay and straw; tallow and raw hides; salt, rice, corn and grain unground; biscuit or bread, meal or flour, except wheat flour; fresh meat and fish, fruit and vegetables, carriages of travellers, wood and lumber, cotton wool, hemp, flax, and tow, drugs, gums, and resins, tortoise-shell, manures of all kinds, herrings taken and cured by the inhabitants of the Isle of Man, and imported from thence; provisions and stores for the use of her Majesty's forces; all goods imported from the U. K. after having there paid the duties of consumption, and imported from thence without drawback.

§ 8. The following articles (namely), salted or cured meat, flour, butter, cheese, molasses, cork-wood, cordage, oakum, pitch, tar, turpentine, leather and leather-ware, fishermen's clothing and hosiery, fishing-craft, utensils, instruments, and bait, shall be also exempt from duty if imported for the use of the British fisheries in America, into any place at or from whence any such fishery is carried on.

§ 9. There shall be levied a duty of 10 *per centum ad valorem* upon sugar refined in bond in the U. K., not being of the growth of any of the B. P. in America, or of Mauritius, or of any B. P. within the limits of the E. I. Co.'s charter, imported or brought into any of the B. P. in America, or into Mauritius.

§ 10. If any colonial duty is higher on British goods than on similar foreign goods, the imperial duty imposed by this act on such foreign articles shall be increased by such excess.

§ 11. Grants power to her Majesty, by order in council, to add any article chargeable under this act as an unenumerated article with a duty of 4 *per centum ad valorem*, to the list of exemptions herein-before set forth.

§ 12. The duties shall be levied under the regulations of the former act, except in so far as the same are repealed or altered by this act.

§ 13. Duties to be payable in sterling money, or in foreign coins, at rates proclaimed to be equivalent thereto, and according to the imperial system of measures.

§ 14. Application of the produce of these duties.

§ 15. Goods from the Channel Islands to be admitted as goods of the U. K.

§ 16 Legalizes certain past irregularities in the mode of levying the duties.

§ 17. In any B. P. in America in which the imperial duties imposed by the former act (3 & 4 Wm. IV. c. 59), and the colonial duties imposed by the laws of such possession, have both been customarily levied in full, without making any deduction from the imperial duties in respect of the colonial duties (as provided for by § 11 of said act), or from the colonial duties in respect of the imperial duties, it shall be lawful to continue so to levy in full such imperial and colonial duties respectively during the continuance of the said former act.

The existing differential duties in Britain in favour of the colonies are shown in the Tariff.

CORN. On 29th April 1842, a new act (5 & 6 Vict. c. 14) was passed for regulating the importation of corn, which, though still retaining the principle of the variable scale of duties, reduces the rates to be levied. In other respects, the provisions of this act are nearly the same as those in the old, 9 Geo. IV. c. 60 (*vide* pp. 208, 209); differing chiefly in the addition made by the new act to the number of towns furnishing the returns of the prices of British corn, from which the average prices for regulating the duty are ascertained, and in its devolving (except in London, Oxford, and Cambridge) the duty of inspecting those returns upon the officers of excise.

The following is the new Table of Duties:—

IMPORTED FROM ANY FOREIGN COUNTRY.

Wheat.			Wheat Flour.					Rye, Pease, Beans.			Barley, Maize, Buckwheat.			Oats.			Oatmeal.		
Average Price per Quarter.	Duty per Qr.		Duty per Cwt.		Duty per Barrel of 196 lbs.			Average Price per Quarter.	Duty per Qr.		Average Price per Quarter.	Duty per Qr.		Average Price per Quarter.	Duty per Qr.		Duty per Cwt.		
s. s.	s.	d.	s.	d.	s.	d.		s. s.	s.	d.	s. s.	s.	d.	s. s.	s.	d.	s.	d.	
under 51	20	0	6	10½	12	0	12*	under 30	11	6	under 26	11	0	under 19	8	0	4	11	29*
51 .. 52	19	0	6	6⅜	11	5	5	30 .. 33	10	6	26 .. 27	10	0	19 .. 20	7	0	4	3	101
52 .. 55	18	0	6	2¼	10	9	30	33 .. 34	9	6	27 .. 30	9	0	20 .. 23	6	0	3	8	52
55 .. 56	17	0	5	10⅛	10	2	23	34 .. 35	8	6	30 .. 31	8	0	23 .. 24	5	0	3	1	3
56 .. 57	16	0	5	6	9	7	16	35 .. 36	7	6	31 .. 32	7	0	24 .. 25	4	0	2	5	75
57 .. 58	15	0	5	1⅞	9	0	9	36 .. 37	6	6	32 .. 33	6	0	25 .. 26	3	0	1	10	26
58 .. 59	14	0	4	9¾	8	5	2	37 .. 38	5	6	33 .. 34	5	0	26 .. 27	2	0	1	2	98
59 .. 60	13	0	4	5⅝	7	9	27	38 .. 39	4	6	34 .. 35	4	0	27 & upwards.	1	0	0	7	49
60 .. 61	12	0	4	1½	7	2	20	39 .. 40	3	6	35 .. 36	3	0						
61 .. 62	11	0	3	9⅜	6	7	13	40 .. 41	2	6	36 .. 37	2	0						
62 .. 63	10	0	3	5¼	6	0	6	41 .. 42	1	6	37 & upwards.	1	0						
63 .. 64	9	0	3	1⅛	5	4	31	42 & upwards.	1	0									
64 .. 65	8	0	2	9	4	9	24												
65 .. 66	7	0	2	4⅞	4	2	17												
66 .. 69	6	0	2	0¾	3	7	10												
69 .. 70	5	0	1	8⅝	3	0	3												
70 .. 71	4	0	1	4½	2	4	28												
71 .. 72	3	0	1	0⅜	1	9	21												
72 .. 73	2	0	0	8¼	1	2	14												
73 & up.	1	0	0	4⅛	0	7	7												
Produce of and imported from any British Possession out of Europe.																			
under 55	5	0	1	8⅝	3	0	3	under 30	3	0	under 28	2	6	under 22	2	0	1	2	98
55 .. 56	4	0	1	4½	2	4	28	30 .. 31	2	6	28 .. 29	2	0	22 .. 23	1	6	0	11	13
56 .. 57	3	0	1	0⅜	1	9	21	31 .. 32	2	0	29 .. 30	1	6	23 & upwards.	0	6	0	3	85
57 .. 58	2	0	0	8¼	1	2	14	32 .. 33	1	6	30 .. 31	1	0						
								33 .. 34	1	0	31 & up.	0	6						
58 & upwards.	1	0	0	4⅛	0	7	7	34 & up.	0	6									

Note.—Flour is rated to pay for every barrel of 196 lbs. a duty equal in amount to the duty payable on 38½ gallons of wheat; and oatmeal for every 181½ lbs., a duty equal in amount to the duty payable on a quarter of oats. It is the practice to enter the above by the cwt.

* The fractions under barrel of flour are 32 parts of a penny; under oatmeal, 121 parts.

Allowances on Bonded Corn.—The Customs Act, 5 & 6 Vict. c. 47, § 53, provides for the following allowances being made on account of the natural decrease on corn in the warehouse, upon the exportation thereof or entry for home consumption:—Wheat, barley, and rye, 1 month and less than 3 m. 1½ per cent.; 3 months and under 6 m. 2 per cent.; 6 months and less than 12 m. 2½ per cent.; 12 months and upwards, 3 per cent. Oats, 1 month and less than 3 m. 2½ per cent.; 3 months and less than 6 m. 3½ per cent.; 6 months and less than 12 m. 4½ per cent.; 12 months and upwards, 5 per cent. On Spanish wheat, barley, and oats, and on wheat and barley kiln-dried abroad, only half the allowance is to be made, and none to be made on rye kiln-dried. The allowance not to be made unless where there is an actual deficiency.

Substitution of Flour or Biscuit for Bonded Wheat.—By the 5 & 6 Vict. c. 92, passed August 10, 1842, wheat is permitted, till August 31, 1845, to be delivered from the warehouse or the vessel duty free, upon the previous substitution of an equivalent quantity of flour or biscuit in the warehouse.

§ 1. The proportions are, for every 96 lbs. of kiln-dried wheat, or every 100 lbs. of wheat not kiln-dried, 78 lbs. fine wheat flour, 68 lbs. of captain's biscuit, 80 lbs. of the standard biscuit supplied to the navy, or 118 lbs. common ship-biscuit.

§ 2. Certificate of the deposit to be given, to last 6 weeks, and sanction removal of warehoused wheat during that time.

§ 3. The depositor or the holder of the certificate entitled to enter correspondent quantity of wheat from the vessel, duty free.

§ 6. The flour and biscuit to be subject to the usual warehouse rules, but not to be removable for home consumption, except on payment of the import duty.

§ 7. The flour or biscuit not to be re-imported.

§ 8. Where there is fraud in the quality of the deposit, it is forfeited, with £5 per qr.

The Average Prices under the late act, 9 Geo. IV. c. 60, from the date of its passing, July 15, 1828, to the date of its repeal, April 29, 1842, were per quarter as follows:—Wheat, 59s. 4d.; barley, 32s. 7d.; oats, 22s. 8d.; rye, 35s. 5d.

CUSTOMS REGULATIONS. The new Customs Act, 5 & 6 Vict. c. 47, contains the following sections applicable to this department:—

Provisions, § 3. The 3 & 4 Wm. IV. c. 51, repealed, so far as it prohibits importation of beef or pork, cattle, mutton, lamb, sheep, swine, and fish of foreign taking or curing, or in foreign vessels. § 4. Fish of foreign taking (except anchovies, eels, turbot and lobsters), train oil, blubber, spermaceti oil, head matter, skins, bones, and fins, are prohibited (with penalty of forfeiture) from being imported in fishing-vessels, or otherwise than as having duly cleared out from a foreign port. § 5. So much of 3 & 4 Wm. IV. c. 52, as allows turbot to be landed without entry, &c. repealed.

Tobacco, § 6. The restrictions on the packages of tobacco not to extend to negrohead the produce of and imported from the United States in packages of not less than 150 lbs., nor to the produce of Mexico, Colombia, South America, St Domingo, or Cuba, imported from the warehouse in British America, in packages of not less than 80 lbs. § 7. The regulation requiring the weight and tare to be marked on each package of tobacco, repealed. § 8. The prohibition of the reimportation by bill of store of tobacco exported, repealed, and such reimported tobacco subjected to the usual import regulations. § 9. Section 3 of 3 & 4 Wm. IV. c. 52, requiring separate manifest, &c. for tobacco, repealed, and tobacco to be included with other goods in general manifest. § 10. No drawback to be allowed on tobacco, unless where the full duty has been paid on the bulk, and where there is no adulteration. Attempts to obtain drawback fraudulently, involve, besides any other penalty, treble the amount of drawback sought, or £200, at the election of the commissioners, with seizure of the tobacco.

§ 11. *Manufactures imported with marks bearing to be those of manufacturers in the United Kingdom*, forfeited.

§ 12. *Spirits* may be imported in stone bottles not exceeding the size of quart bottles, if really part of the cargo, and included in manifest, &c.

§ 14. *Sugar* to be included in the list of commodities for which no abatement for damage in the voyage is allowed.

§§ 54, 55. Provision for standard loaves of double-refined sugar as a criterion for the bounty.

§ 61. The provisions of 9 Geo. IV. c. 93, for taking the averages of brown sugar, the produce of America, to be extended to East India sugar, and the averages to be struck between both.

Imports undervalued, § 15. In relation to the protection of the revenue in case of imports undervalued, the officers may detain and secure such goods, and within 10 days after they are finally examined in virtue of a duty-paid entry, take them for the use of the crown, when the commissioners are to pay the proprietor his valuation, with 10 per cent. and the duties paid, as full satisfaction to the proprietor. § 16. Section 122 of 3 & 4 Wm. IV. c. 52, as to cancelling of bonds within three years, not to extend to bonds for the exportation of, or the payment of duty on, warehoused goods.

Abatements, § 17. No abatement in terms of 6 & 7 Wm. IV. c. 60, on foreign goods. Derelict, jetsam, flotsam, and wreck, to be made in the case of cantharides, cocoa, coffee, coculus indicus, currants, figs, Guinea grains, ipecacuanha, jalap, lemons, nux vomica, opium, oranges, pepper, raisins, rhubarb, sarsaparilla, senna, spirits, sugar, tea, tobacco, and wine.

Drawbacks, § 18. No drawback to be allowed on the exportation of goods of less value than the drawback claimed, and when goods of less value are entered, they are to be forfeited, and the person entering to forfeit £200 or treble the value of the drawback claimed, at the election of the commissioners. § 19. On entry outwards of goods obtaining drawback, and before cocket, bond to be given in double the value of the goods, with one surety, that they shall be duly shipped and exported, and landed at their port of destination, or otherwise accounted for to the commissioners. § 20. Doubts as to the validity of bonds by merchants, on which indulgences have been granted by the Treasury or the commissioners, put an end to.

§ 46. Drawback on barilla, used in bleaching, discontinued. § 47. The drawback on cleaned rice to apply to the new duties on foreign rice in the same manner as to the old.

§ 56. Drawbacks on manufactures from duty-paid thrown silk, and wood used in mines, repealed.

Books, §§ 23 & 24. Section 58 of 3 & 4 Wm. IV. c. 52, as to the prohibition of the importation of certain copyright-books, repealed after 1st April 1843, and the prohibition made absolute against all books in which there exists a copyright. § 25. But for the operation of the prohibition, the proprietor of the copyright, or his agent, must give notice in writing to the commissioners that the copyright subsists, stating when it will expire; printed lists for the use of custom-houses being made up from the notices.

Certificates, § 27. The provision which requires a certificate of clearance out when a benefit is derived from the cargo being cleared out from British America, extended to all goods from British Possessions abroad, except the three India presidencies. § 28. The treasury authorized to declare a certificate of production necessary in any case of importation, and to frame regulations accordingly. In absence of such certificate, or a certificate of clearance, where that is necessary, the goods are held as foreign imports.

Timber, § 29. Importers of timber to pile it suitably for measurement, and in the measurement no deduction to be made for interstices. Battens, boards, deals, and planks exceeding 21 feet may be measured by the piece.

§ 45. *Manufactures of the Channel Islands or Man*, made of foreign materials, liable to, but which have not paid, duty, or have obtained a drawback (except linen and cotton from Man), to be considered foreign imports. [By c. 56, § 3, the provision is declared not to extend to any manufactures of the islands, the materials of which are not foreign.]

DESIGNS. On 20th August 1842, an act (5 & 6 Vict. c. 100) was passed to consolidate and amend the laws relating to the Copyright of Designs for ornamenting articles of manufacture. Its chief provisions are the following:—

§ 1. 27 Geo. III. c. 38, 29 Geo. III. c. 19, 34 Geo. III. c. 23, and 2 Vict. c. 13, repealed. § 2. But copyrights constituted by these statutes to remain in force for the time limited thereby. § 3. Different lengths of copyright, according to the manufacture to which the design is applicable, as follows:—In the 1st, 2d, 3d, 4th, 5th, 6th, 8th, and 11th classes, for 3 years. In 7th, 9th, and 10th, for 9 calendar months. In the 12th and 13th, for 12 calendar months. The manufactures are as follow,—1st, Metals; 2d, Wood; 3d, Glass; 4th, Earthenware; 5th, Paper-hangings; 6th, Carpets; 7th, Shawl-prints; 8th, Other shawl-patterns; 9th, Prints for yarn thread or warp; 10th, Prints for woven fabrics composed of linen, cotton, wool, silk, or hair—articles in class 11 excepted. 11th, Furniture-prints for fabrics of linen, cotton, wool, silk, or hair, the repeat of the design being more than 12 by 8 inches. 12th, Woven fabrics not in any of the above; 13th, Lace and any other manufactures not included in the above.

§ 4. To create copyright, the design must be registered. § 5. The inventor is to be considered as proprietor, unless he has been hired, and in that case the employer is to be proprietor. The right is saleable, and otherwise passes as ordinary property. § 6. Acquisitions of property in designs to be registered. A form of transfer and authority to register, &c. § 7. Prohibition against making use of registered designs by fraudulent imitation, &c., and against sale of fraudulent imitations after notice from the proprietor, or knowledge otherwise obtained of the fraud. § 8. Penalty for pirating, not less than £5, or more than £30. § 9. This remedy not to preclude an ordinary action of damages. § 11. Penalty for wrongfully using registration marks in designs, for each offence a sum not exceeding £5. § 12. No actions to be brought under the act after 12 months from the commission of the offence.

§ 15. The designs are registered in succession. § 16. The registrar is to give a certificate, which is to be *prima facie* evidence of the registration, the originality of the design, the proprietor's name, the date, &c. § 17. Where the copyright has expired, registered designs are inspectable; but where it has not expired, there can be no inspection, except with written authority from the proprietor, or with special permission of the registrar, and in presence of an officer, who is to prevent a copy being taken.

This act is solely applicable to England.

EMIGRANT. In 1842, a new act, 5 & 6 Vict. c. 107, was passed for regulating the carriage of passengers or emigrants in merchant vessels; its chief provisions are the following:—§ 2. Vessels proceeding beyond Europe are not to carry more than 3 persons for each 5 tons register, including master and crew. The space clear for passengers is to be thus assigned,—on the lower deck, one passenger for every 10 clear superficial feet, or, if the ship be to pass within the tropics, for every 12 feet on a voyage not more than 12 weeks, and for every 15 on a voyage more than 12 weeks. Under the poop, and on the orlop-deck (if any), 1 passenger for 30 feet. §§ 3 & 4. Rules as to the construction of the decks. § 5. There must be no more than 2 tiers of berths, and the interval between the floors of the berths and the deck beneath must not be less than 6 inches. The berths to be securely constructed, not less than 6 feet long and 18 inches wide each.

§§ 6 & 7. There shall be issued daily water at the rate of at least 3 quarts for each passenger per day; also not less than twice a-week provisions at the rate of 7 lbs. of bread, biscuit, flour, oatmeal, or rice, per week, one-half at least of the supply to consist of bread or biscuit; potatoes may be employed to the extent of the remaining half, reckoning 5 lbs. potatoes equal to 1 lb. of the other articles: And no ship shall be cleared out until laden with sufficient quantities, reckoning the voyage to N. America, West Indies, Bahamas, and Guiana at 10 weeks; to Central or S. America (except W. coast) and W. coast of Africa, 12 weeks; to Cape of Good Hope, 15 weeks; Mauritius, 18 weeks; W. Australia, 20 weeks; other Australian colonies, 22 weeks; New Zealand, 24 weeks. If calling at intermediate place, the supply to be computed to such place, and the requisite quantity there replaced. Two children, each under 14, deemed one passenger; infants under 1 year not counted.

§ 10. Government emigration agent, and where there is none, the collector and comptroller of customs, to inspect each vessel before clearing out, and attend to the enforcing of the act.

§ 15. Vessels must have physicians on board where they carry 100 passengers (unless it be to North America), or 50 passengers on a voyage longer than 12 weeks. All vessels must have medicine chests.

§ 20. Passage brokers require a license.

There are remedies to intending passengers who lose their passage through the carelessness or fraud of the parties, and in other cases of fraud and neglect. And there are clauses for extending the act to the colonies and India.

In 1841, 118,592 persons emigrated from the U. K.; and in 1842, 128,344.

FACTOR. The law relating to advances *bonâ fide* made to agents intrusted with goods was amended in 1842 by the act 5 & 6 Vict. c. 39, of which the following is a full abstract:—

§ 1. In reference to 6 Geo. IV. c. 94, which leaves doubts as to how far agents may pledge goods for security on advances, enacted, That any agent intrusted with goods, or the documents and titles to them, is to be considered as the owner, so far as "to give validity to any contract or agreement by way of pledge, lien, or security, *bonâ fide* made by any person with such agent so intrusted as aforesaid," both for original advances and continued advances; the contract being binding, though the person making the advances have had notice that the holder is merely an agent.

§ 2. The security may be exchanged, *i. e.* if a person has already advanced to an agent, on deposit of merchandise, documents or security, he may restore it and receive some others in exchange, on the same terms as if he had made an immediate advance on the exchanged security. But the lien on such exchanged security is not to exceed the value of the previous security.

§ 3. The act only to protect *bonâ fide* advances in which there is no notice that the agent is acting fraudulently or without authority; but a mere notice that the agent is not the owner will not affect the validity.

§ 4. Documents within the meaning of the act are, "any bill of lading, India warrant, dock warrant, warehouse-keeper's certificate, warrant or order for the delivery of goods, or any other document used in the ordinary course of business as proof of the possession or control of goods, or authorizing or purporting to authorize, either by indorsement or delivery, the possessor of such document to transfer or receive goods thereby represented." The agent possessed of such a document, whether derived immediately from the owner, or as an accessary to the possession of the goods, is entitled, by pledging it, to give a pledge on the goods it represents, whether the goods be in the actual custody of the agent, or in that of some other person under his control. On an advance being made, on the faith of an agreement in writing to consign, deposit, or transfer goods or documents, when the transference, &c. is made, the transaction is good under the act, as if it had been made at the moment of advance. "And any contract or agreement, whether made direct with such agent, as aforesaid, or with any clerk or other person on his behalf, shall be deemed a contract or agreement with such agent; and any payment made, whether by money or bills of exchange, or other negotiable security, shall be deemed and taken to be an advance within the meaning of this act; and an agent in possession as aforesaid of such goods or documents, shall be taken, for the purposes of this act, to have been intrusted therewith by the owner thereof, unless the contrary can be shown in evidence."

§ 5. Nothing in the act is to affect the ordinary legal responsibility of an agent to his employer.

§ 6. An agent acting fraudulently, in taking, for his own behoof, advances on the goods consigned to him, is liable to transportation. A clerk or other person accessory is punishable in like manner. No agent is punishable for fraud, however, who takes no more on the security than his principal was owing him at the time, counting accepted bills. An agent's conviction is not to be evidence against him in a civil action; and an agent is not liable to criminal prosecution for an act which he has previously had to disclose on a reference to oath, "or if he shall have disclosed the same in any examination or deposition before any commissioner of bankrupt." (N.B.—This would probably be held to apply to sequestrations in Scotland.)

§ 7. The owner may recover his deposit at any time before it is sold, by repayment of the advance, and of any debt which the agent may have a lien for; and if the deposit shall have been sold, he may recover any surplus over the advance. In case of the bankruptcy of the agent, an owner who has redeemed as above, "shall, in respect of the sum paid by him on account of such agent for such redemption, be held to have paid such sum for the use of such agent before his bankruptcy; or in case the goods shall not be so redeemed, the owner shall be deemed a creditor of such agent for the value of the goods so pledged at the time of the pledge, and shall, if he think fit, be entitled in either of such cases to prove for or set off the sum so paid, or the value of such goods, as the case may be."

FRANCE. The *Retenue* or charge made to the importers of bullion into the French mints, for defraying the expenses of coinage, was fixed by royal ordinance, June 30, 1835, at 6 francs per kilogramme for gold, and 2 francs per kilogramme for silver; making the prices paid by the mints (instead of those given on page 313), 3094 francs per kilogramme for gold, and 198 francs per kilogramme for silver.

The annual production of iron should have been stated on page 306 at only 3,477,000 quintals.

MACHINERY. The prohibitions affecting the exportation of machinery have been again relaxed. The relaxation is explained in the following extract from a letter addressed by Mr J. G. Shaw Lefevre on behalf of the Committee of Privy Council for Trade, to the Manchester Chamber of Commerce, dated Sept. 8, 1842:—"I am directed by the Lords of the Committee of Privy Council for Trade to inform you, that my Lords have recently recommended the Lords Commissioners of her Majesty's Treasury to grant permission to export certain classes of machinery to which, hitherto, that permission has not been granted. Amongst the machinery for which permission has recently thus been granted, is included machinery for the spinning of cotton and wool; and it is the intention of my Lords to recommend the adoption of the like course as respects all machinery for spinning and manufacturing the above, as well as other substances, excepting those which are used in or applicable to the spinning or manufacture of flax, tow, linen, or lace."

THE END.

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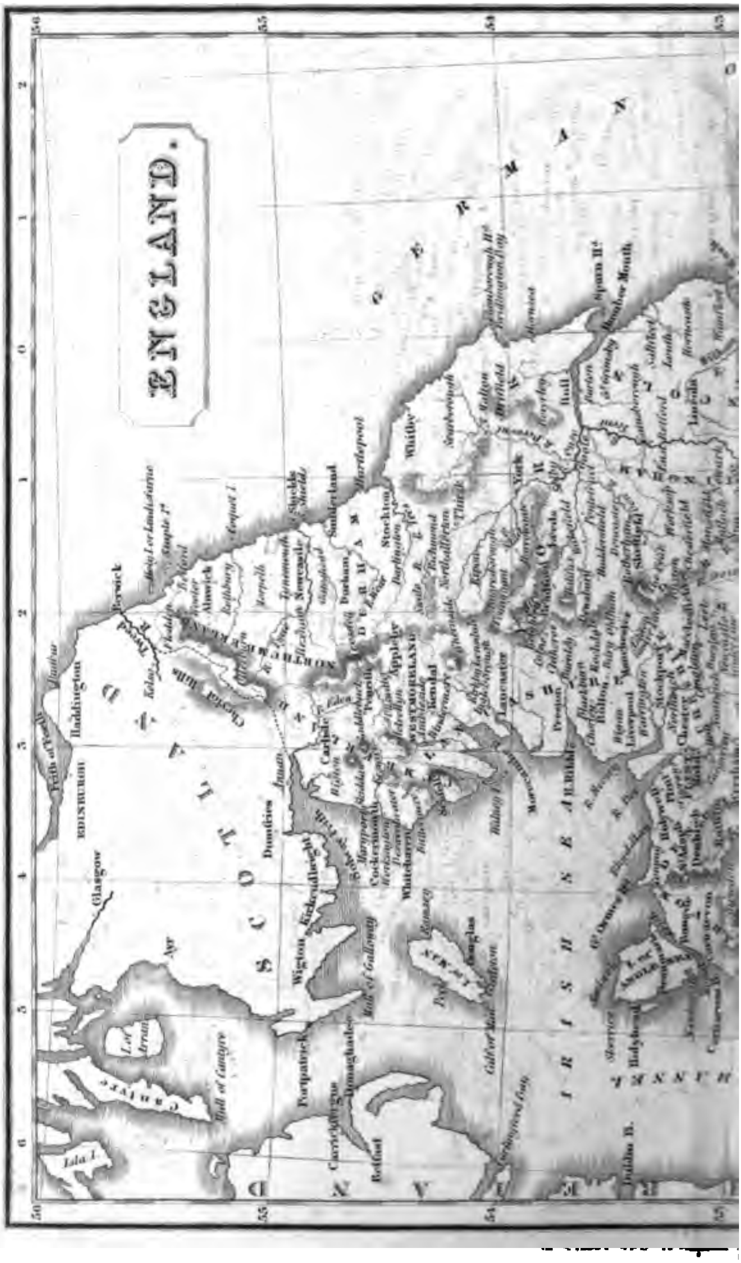
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GERMAN OCEAN
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Tweed R.
Holy I. or Lindisfarne
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Kirkcudbright
Wigton
Portpatrick
Mull of Galloway
Mull of Cantyre
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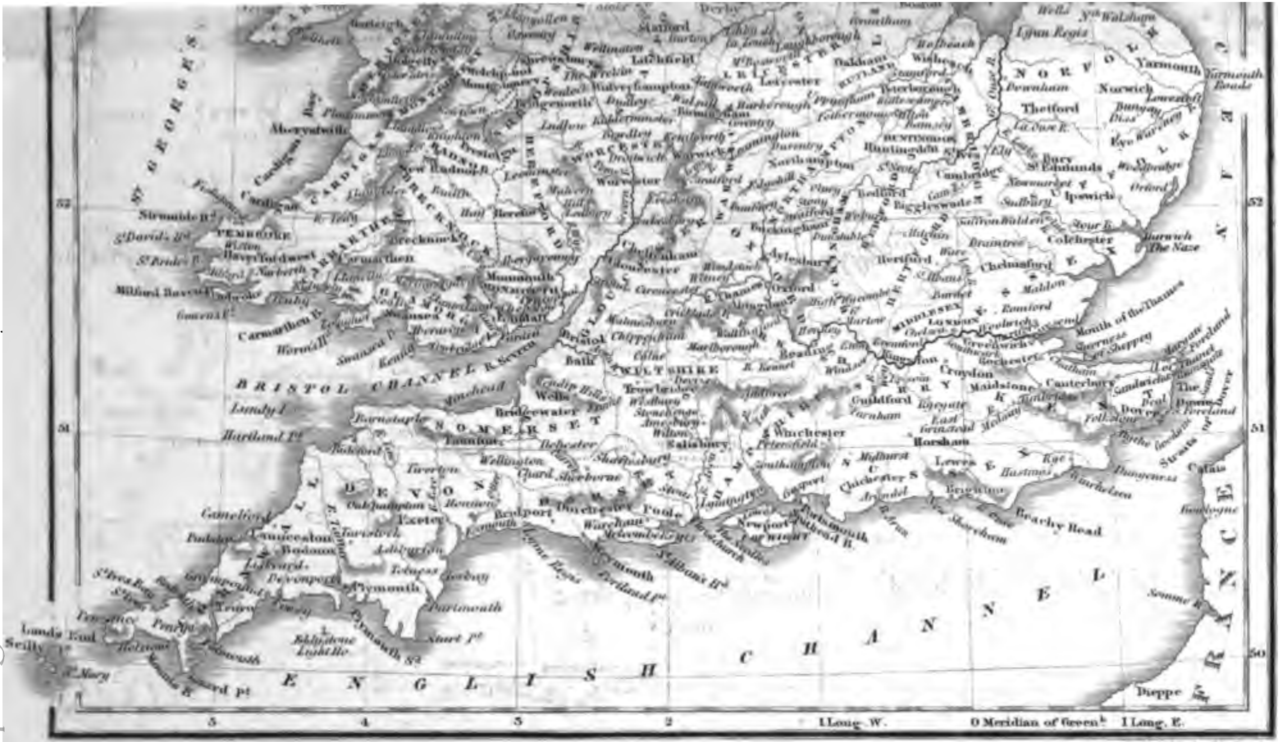

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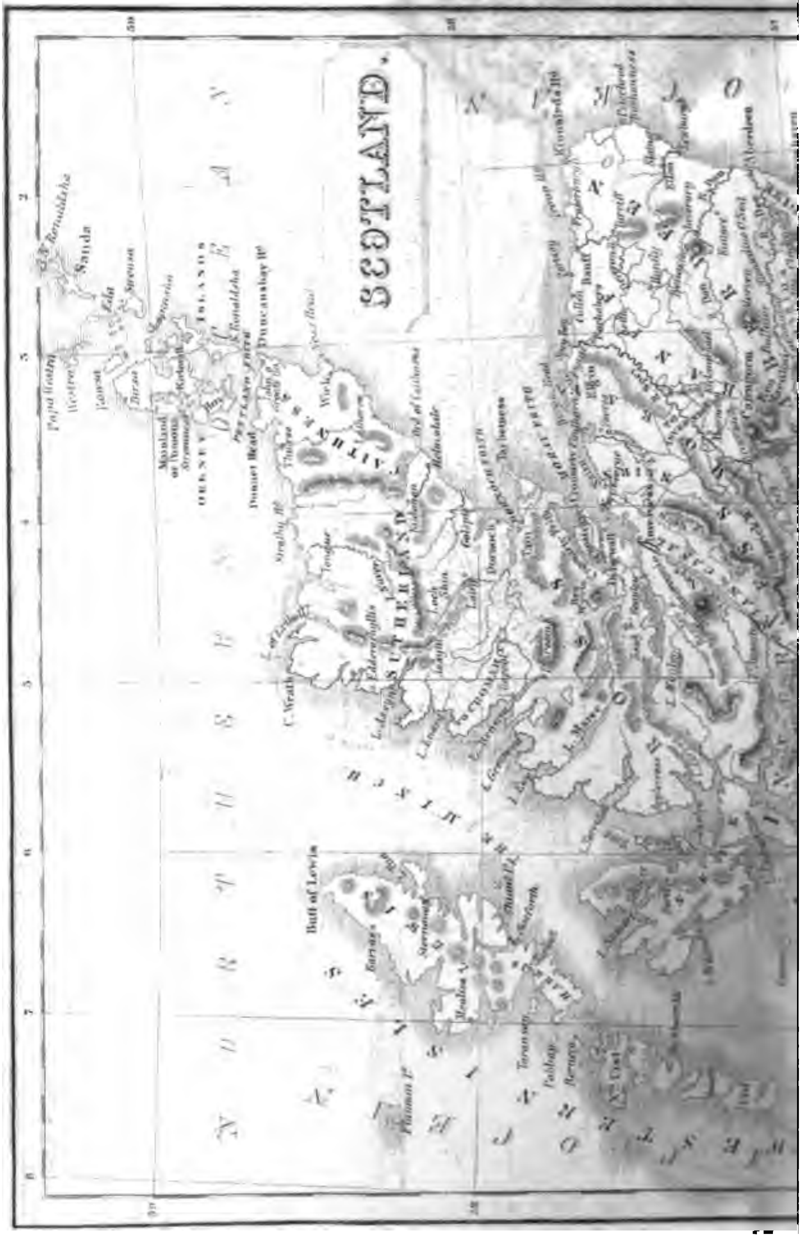
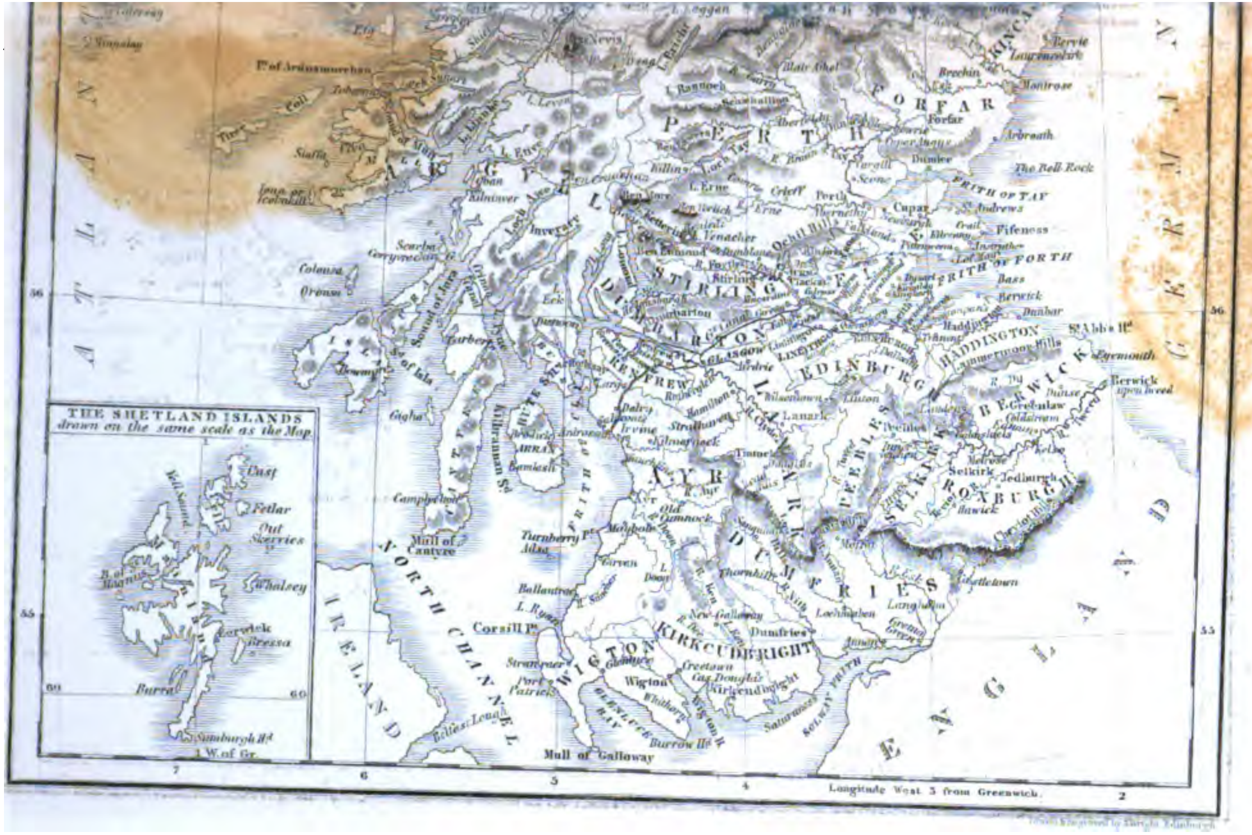

SCOTLAND.
ORKNEY ISLANDS
N. Ronaldsha
Sanda
Stronsa
Eda
Papa Westra
Westra
Rousa
Mainland or Pomona
Stromness
Kirkwall
Hoy
S. Ronaldsha
PENTLAND FIRTH
Duncansbay Hd
Dunnet Head
Thurso
Wick
CAITHNESS
Ord of Caithness
Helmsdale
Strathy Hd
Tongue
C. Wrath
SUTHERLAND
Golspie
Dornoch
Tain
Tarbetness
MORAY FIRTH
Cromarty
Dingwall
Nairn
Forres
Elgin
Cullen
Banff
Peterhead
Aberdeen
Inverness
L. Maree
Buff of Lewis
Barvas
Stornoway
Harris
Taransay
Pabbay
Berneray
N. Uist
Flannan Is.
NORTHERN OCEAN
GERMAN OCEAN



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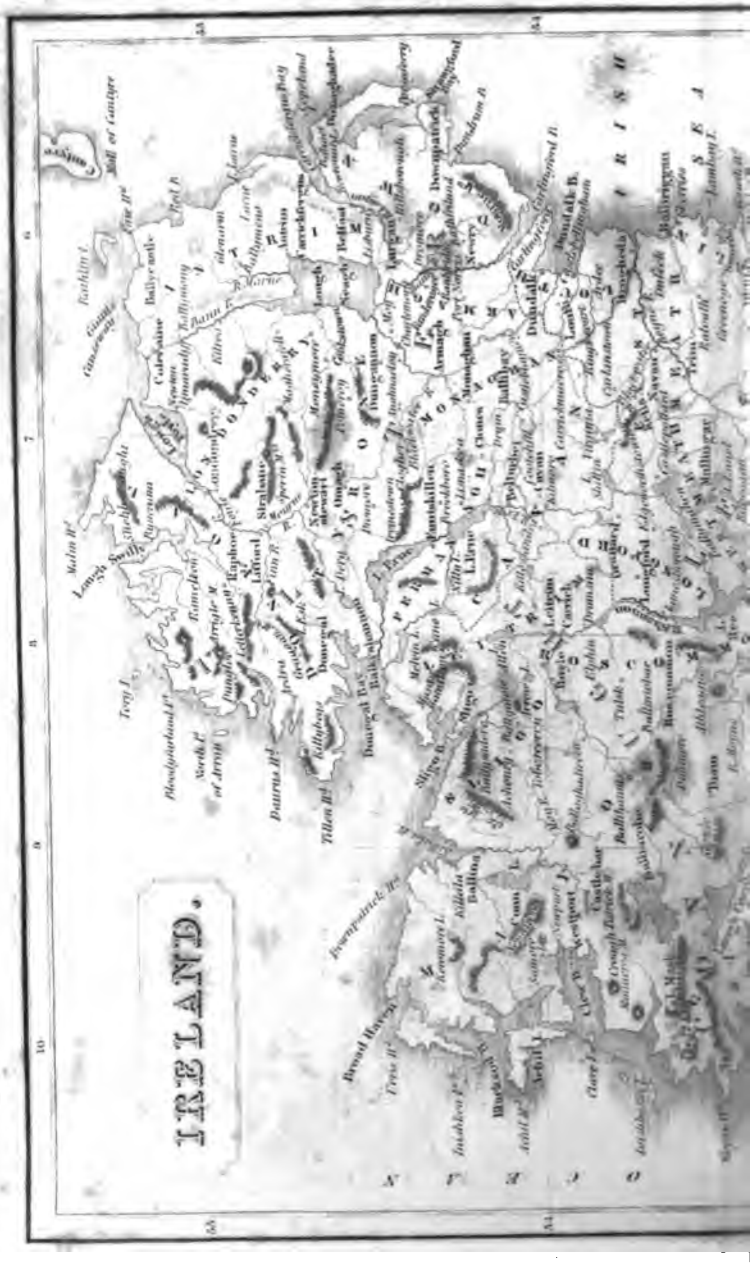
IRELAND.
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Rathlin I.
Mull of Cantyre
Giants Causeway
Ballycastle
Coleraine
Fair Hd.
Bann R.
R. Marne
Glenarm
Larne
Antrim
Carrickfergus
Belfast
Lough Neagh
Lisburn
Downpatrick
Newry
Dundalk
Dundalk B.
Carlingford
Strangford
Malin Hd.
Lough Swilly
Lough Foyle
Londonderry
Newton Limavady
Strabane
Raphoe
Lifford
Donegal
Donegal Bay
Ballyshannon
Killybegs
Tillen Hd.
Dawros Hd.
North Id. of Arran
Bloodyforeland Pt.
Tory I.
Rameltan
Letterkenny
Omagh
Dungannon
Armagh
Monaghan
Enniskillen
L. Erne
Cavan
Belturbet
Sligo B.
Sligo
Killala
Ballina
Broad Haven
Tirra Hd.
Erris Hd.
Achill Hd.
Achill
Clare I.
Castlebar
Westport
Newport
Ballinrobe
Tuam
Boyle
Carrick
Roscommon
Longford
Granard
Athlone
Mullingar
Drogheda
Trim
Navan
Kells
Dunleer
Ardee
Cootehill
Monaghan
Fermanagh
Tyrone
Antrim
Down
Leitrim
Mayo
Sligo
Longford
Westmeath
Louth
I R I S H
S E A
Inishkea I.
Inishbofin I.
Slyne Hd.
Rosscommon
Lambay I.

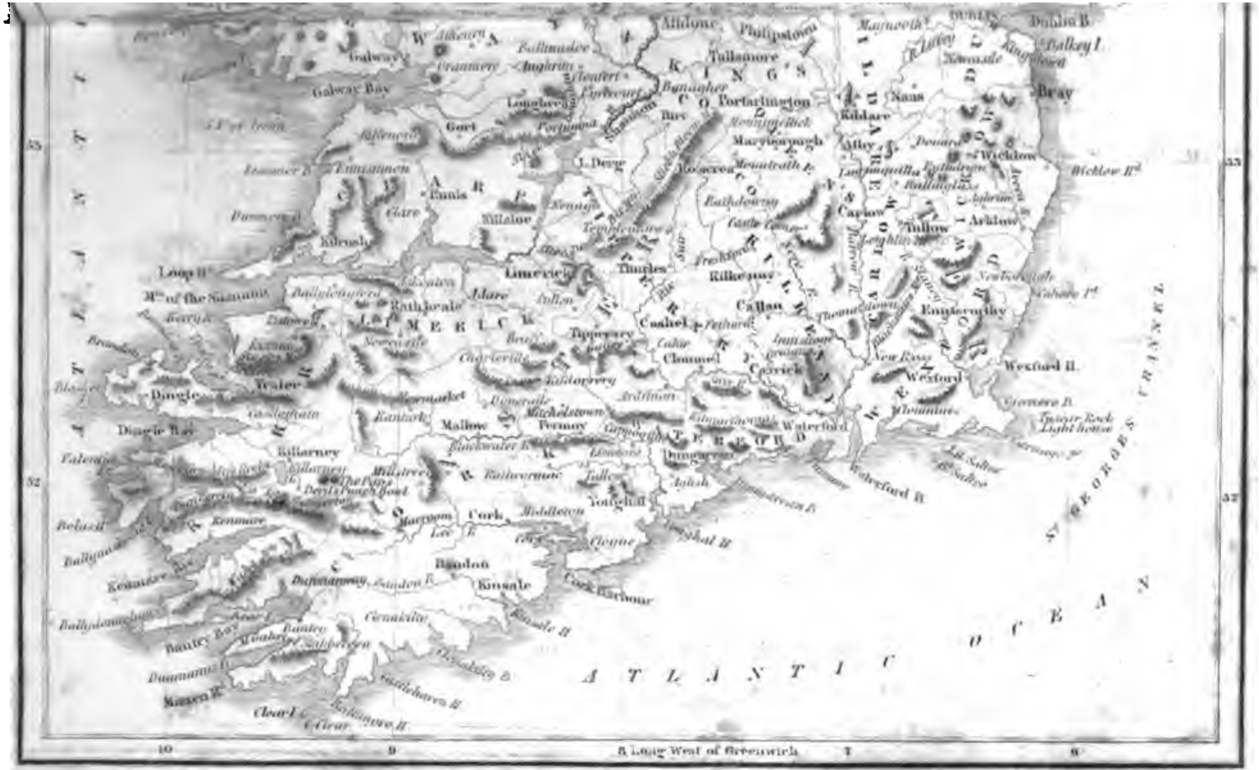

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TABLE OF THE FRENCH CUSTOMS' DUTIES

ON THE

Principal Articles usually Imported from England into France,

COMPILED FROM THE LAST TARIFF.

		Francs.	Cents.
ANCHORS, weighing 250 kilogrammes each or less	per 100 kilogrs.	15	0
„ above 250 kilogrammes each	„	10	0
BEER, Ale, or Porter	per hectolitre	6	0
If in Bottles, the duty on Bottles is charged in addition.			
BLANKETS, or Covertures made of Wool	per 100 kilogrs.	200	0
BOOKS, printed in English or in any Foreign or Dead Languages	„	10	0
BOTTLES, made of Glass, and containing Liquids	per litre of the contents	0	15
Empty Bottles are prohibited.			
BRICKS	per 1000	4	0
CARPETS, made of Wool, but with the chain or warp of Flax or Hemp, and the under surface being like canvas	per 100 kilogrs.	300	0
„ If made entirely of Wool	„	500	0
CASHMERE, Indian Scarfs	each	50	0
„ Shawls 6 feet square	„	100	0
„ „ less than 6 feet square	„	50	0
„ „ long	„	100	0
CHAIN-CABLES	„	37	50
CHEESE	„	15	0
CHINA-WARE, common	per 100 kilogrs.	164	0
„ fine	„	327	0
CIDER, Perry and Verjuice	per hectolitre	2	0
„ If in Bottles, the duty on Bottles is charged in addition.			
COAL	per 100 kilogrs.	0	50
COAL-TAR	„	0	10
COKE	„	1	0
COPPER, in Bars, Plates, or Nails for Sheating	„	50	0
„ Hammered	„	80	0
ENGRAVINGS, Plain or Coloured	„	300	0
EPSOM SALTS	„	70	0
FILES and RASPS, Rough	„	80	50
„ Fine, of the length of about 6¾ inches and upwards	„	200	0
„ Under that length	„	250	0
FISH, Fresh, Salted, or Dried	„	40	0
FRUITS, for Table use, including Oranges, Lemons, &c.	„	10	0
GLASS MIRRORS	Ad Valorem, 15 per cent.		
GUNS, for sporting purposes	per 100 kilogrs.	200	0
HOOKS and FISH HOOKS	„	200	0
HOPS	„	60	0
HORSES	each	25	0
Colts	„	15	0
HOUSEHOLD FURNITURE	Ad Valorem, 15 per cent.		
INK, for Writing or Printing	per 100 kilogrs.	60	0
IRON, in Pigs or Masses for casting, not weighing less than 15 kilogrammes, each	„	7	9
„ Wrought-Iron Bars, Rails, or Plates, according to their dimensions, from		18 75 to 37	50
LEAD	„	24	0
LEAD PENCILS, in Soft Wood	„	100	0
in Cedar or Hard Wood	„	200	0
LEATHER, for Soles of Shoes	„	75	0
LITHOGRAPHIC IMPRESSIONS	„	300	0
MACHINES and Mechanical Instruments	per Machine	According to description, too numerous to particularise in this table.	
MANGANESE	per 100 kilogrs.	1	0
"**MERCERIE**," Common, including various small articles	„	100	0
„ Fine	„	200	0
METALLIC or STEEL PENS	per 1 kilogr.	4	0
MOHAIR YARN	per 100 kilogrs.	20	0
MUSIC, printed	„	300	0
NEEDLES, for sewing under 1½ inches	per 1 kilogr.	8	0
from 1½ to 2 inches		5	0

French Customs' Duties on English Goods—continued.

		Francs.	Cents.
PEWTER	per 100 kilogrs.	60	0
POTTERY, of coarse earth	„	6	0
„ for common Table use	„	15	0
RUM and TAFIA	per hectolitre	200	0
SCYTHES, for Agricultural use	per 100 kilogrs.	150	0
„ Sickles, &c.	„	80	0
SEALING WAX	„	100	0
SILK MANUFACTURES:—Indian Handkerchiefs, unbleached	per kilogr.	7	0
„ „ printed	„	14	0
SILK, Spun, unbleached	per 100 kilogrs.	82	0
„ bleached	„	306	0
„ Raw	„	5	0
„ Milled	„	10	0
SHIPS' SAILS AND FITTINGS	Ad Valorem, 10 per cent.		
SKINS, Dry Hides—Kid Skins	per 100 kilogrs.	1	0
„ Sheep and Lamb Skins with the Wool	„	13⅓ per 100 fr. value.	
„ „ without the wool	per 100 kilogrs.	1	0
STEAM ENGINES, ordinary	„	30 per cent.	
„ Locomotive Engines	„	15 per cent.	
„ Steam Engines for French vessels are exempt.			
STEEL, of the first process	per 100 kilogrs.	60	0
„ In finished Bars	„	120	0
„ In finished Plates	„	80	0
„ Wire	„	100	0
TIN and TIN PLATES	„	70	0
TOOLS, made entirely of Iron	„	50	0
„ of Iron and Steel	„	140	0
„ of Steel only	„	200	0
„ of Copper or Brass	„	150	0
WAFERS	„	100	0
WINES;—Port Wine, dry	per hectolitre.	35	0
„ „ sweet	„	100	0
„ Sherry, Madeira, or Teneriffe	„	100	0
If in bottles, the duty on Bottles is charged in addition.			
WOOL, Goat's	per 100 kilogrs.	1	0
„ Sheep's	Ad Valorem, 20 per cent.		
„ If Carded	„	30 per cent.	
„ If dyed	per 100 kilogrs.	300	0
WRITING PAPER	„	150	0

N.B. TEN PER CENT. ADDITIONAL DUTY is charged on all Articles.

By the Treaty of Commerce between France and England, the productions of Europe which have been conveyed first into English Ports or the English possessions in Europe, may be imported into France *by English vessels*, on payment of the same duties as if imported in French vessels, on condition that all Merchandize common to Europe, Asia, Africa, and America, shall be proved to be of European origin. The following articles, are, however, exempted from such Certificate of origin:—Oil, Emery-Stone, Sulphate of Magnesia, Zinc, Litharge, Soda, Pig-Lead, Chromate of Potassium, Cast-Iron, Hemp or Flax Thread, Flax or Hemp Cloth, Plain Linen-Cloth, Mill-Stones, and Grind-Stones, Wrought-Iron Bars, Iron Anchors and Cables, Machines and Mechanical Instruments, Sewing Needles, Beer, Bricks, Steel of every kind: Tools, whether of Iron, Steel, Copper, or Brass, or Iron surcharged with Steel; Rum, Hair Brushes, Sulphuric, Arsenic, Citric, Tartaric, Oxalic, and Boracic Acids; Blacking, Animal Black, Printing Ink, and a natural Mineral Black, called *Grant's* or English Black.

The following Merchandizes are prohibited in France:—

1st.—European productions imported *by English vessels from every European port* except the ports of England or its possessions in Europe.

2nd.—The productions of Asia, Africa, and America, imported from England, or from its possessions in Europe, by vessels of all nations.

3rd.—The productions of Asia, Africa, and America, imported *by English vessels*, whether from European or foreign ports.

There are, however, exceptions in favour of Raw Silk and Unbleached Handkerchiefs from India; Rum, Arrack, and Tafia, of whatever origin: and Cashmere Shawls

THE TARIFF.

The new Acts are here given, although the substance of them is embodied in the accompanying Tables.

ANNO OCTAVO & NONO VICTORIÆ REGINÆ.

CAP. XC.

AN ACT FOR GRANTING DUTIES OF CUSTOMS.

[4th *August* 1845.]

WHEREAS an Act was passed in the Session of Parliament holden in the Third and Fourth years of the reign of King *William* the Fourth, intituled *An Act for granting Duties of Customs,* whereby the several Duties of Customs were consolidated into one Act: And whereas since the passing of the said Act divers parts of Acts altering the said duties have been passed, and it will be of advantage to the trade and commerce of the country that the said several duties should be consolidated into one Act: Be it therefore enacted by the Queen's most excellent Majesty, by and with the advice and consent of the Lords spiritual and temporal, and Commons, in this present Parliament assembled, and by the authority of the same, That from and after the passing of this Act the same shall come into and be and continue in full force and operation for all the purposes mentioned therein, except where any other commencement is herein particularly directed.

II. And be it enacted, That in lieu and instead of all other duties and drawbacks of customs (except the duties and drawbacks upon Corn, Grain, Meal or Flour, Sugar, and Molasses) there shall be raised, levied, collected, and paid unto Her Majesty, her heirs and successors, upon goods, wares, and merchandize imported into or exported from the United Kingdom, the several duties of customs, and there shall be allowed the several drawbacks, as the same are respectively inserted, described, and set forth in figures in the tables marked (A.) and (B.) to this Act annexed, together with the additional duties hereinafter mentioned.

III. And be it enacted, That the duties imposed upon Corn, Grain, Meal, and Flour by an Act passed in the Session of Parliament holden in the fifth and sixth years of the reign of Her present Majesty, intituled *An Act to amend the laws for the importation of corn,* shall be raised, levied, collected, and paid in such and the same manner in all respects as the several duties of customs mentioned in this Act are directed to be raised, levied, collected, and paid.

IV. And be it enacted, That there shall be charged, raised, levied, collected, and paid unto Her Majesty, her heirs and successors, in addition to the duties mentioned in the said table marked (A.), upon every gallon of spirits or strong waters of all sorts imported into the United Kingdom a further duty of fourpence, and upon all the articles enumerated in the said table marked (A.), except spirits and strong waters, a further duty of five *per centum* upon the amount of the several duties in and by the said table marked (A.) respectively charged upon the said articles, and each of them, except the following articles; (that is to say,)

Isinglass;
Oils, chemical, essential, or perfumed;
Oils, essential, of cloves;
Pickles preserved in vinegar;
Pickles or vegetables preserved in salt;
Refined camphor;
Smalts;
Turpentine;
Verdigris;
Yarn Cable;
Glass of all sorts.

V. And be it enacted, That the amount of drawbacks granted, allowed, and made payable upon goods, wares, and merchandize, exported from or used or consumed in Great Britain or Ireland, under or by virtue of any Act or Acts in force in Great Britain or Ireland, on or immediately before the passing of this Act, shall remain and continue payable with respect to such goods, wares, and merchandize as, having paid the duties imposed upon the importation thereof by any such Act or Acts, shall, from and after the passing of this Act, be exported from or be so used or consumed in Great Britain or Ireland respectively.

VI. And be it enacted and declared, That all goods whatsoever which shall have been warehoused without payment of duty upon the first importation thereof, and which shall be in the warehouse at the commencement of the duties imposed by this Act, shall be deemed and taken to be liable to such duties.

VII. And be it enacted, That the Duties and Drawbacks by this Act imposed and allowed shall be under the management of the Commissioners of Her Majesty's Customs, and shall be ascertained, raised, levied, collected, paid, and recovered, and allowed and applied or appropriated, under the provisions of an Act passed in the present Session of Parliament, intituled *An Act for the general Regulation of the Customs.*

VIII. And be it enacted, That it shall be lawful for Her Majesty, by and with the advice of Her Privy Council, by Her Order in Council, from time to time to order and direct that there shall be levied and collected any additional Duty, not exceeding one fifth of the amount of any existing Duty, upon all or any goods, wares, or merchandize, the growth, produce, or manufacture of any Country which shall levy higher or other Duties upon any article the growth, produce, or manufacture of any of Her Majesty's Dominions than upon the like article the growth, produce, or manufacture of any other Foreign Country, and in like manner to impose such additional Duties upon all or any goods when imported in the Ships of any Country which shall levy higher or other Duties upon any goods when imported in *British* Ships than when imported in the national Ships of such Country, or which shall levy higher or other Tonnage or Port or other Duties upon *British* Ships than upon such national Ships, or which shall not place the Commerce or Navigation of this Kingdom upon the footing of the most favoured Nation in the Ports of such Country, and either to prohibit the importation of any manufactured article the produce of such Country in the event of the export of the raw material of which such article is wholly or in part made, being prohibited from such Country to the *British* Dominions, or to impose an additional Duty, not exceeding one fifth as aforesaid, upon such manufactured article, and also to impose such additional Duty in the event of such raw material being subject to any Duty upon being exported from the said Country to any of Her Majesty's Dominions; and all Duties imposed by any such order shall be deemed to be Duties imposed by this Act.

IX. And whereas by an Act passed in the fifty-ninth year of the Reign of His late Majesty King *George* the Third, intituled *An Act to carry into effect a Convention of Commerce concluded between His Majesty and the United States of* America, *and a Treaty with the Prince Regent of* Portugal, divers provisions were made respecting the Duties payable and the bounties and allowances to be granted upon the importation and exportation of goods, wares, and merchandize into or from the United Kingdom in Vessels of the United States and in *Portuguese* Vessels, and respecting the repayment to certain corporations, bodies politic and corporate, and sundry other Persons, of the amount of the sums of money of which they would be deprived by means of the said Act, and it was thereby enacted that the said Act should continue in force so long as the Convention therein recited between His said late Majesty and the United States of *America*, and the Treaty therein recited between His said late Majesty and His Royal Highness the Prince Regent of *Portugal*, and so long as any Treaty to be made with any Foreign Power with the similar provisions therein-before recited, should respectively continue in force: and whereas, subsequently to the enactment of the said recited Act, Her Majesty and Her Royal Predecessors have made and concluded with divers Foreign Powers Treaties containing provisions similar to those recited in the said recited Act, and doubts have arisen whether, according to the true construction thereof, the said Act doth apply and extend to the trade and shipping of such other Foreign Powers, and whether the same applies to differential Duties or Charges on Goods imported or exported in Foreign Ships as well as to differential Duties and Charges on Foreign Ships, and it is expedient that such doubts be removed; be it therefore enacted and declared, That from and after the ratification of any Treaty heretofore made by Her Majesty, or any of Her Royal Predecessors subsequently to the enactment of the said Act, or of any Treaty which may hereafter be made by Her Majesty, Her Heirs and Successors, with any such Foreign Power, in which Treaty has been or shall be contained provisions similar to those recited in the said recited Act, all and every the provisions, clauses, matters, and things in the said recited Act contained shall apply and extend to the trade and shipping of such Foreign Powers respectively, as fully and effectually to all intents and purposes as to the trade and shipping of the said United States and of the said Kingdom of Portugal, and also shall apply and extend to differential Duties or Charges on Goods imported or exported in the ships of such Foreign Powers as well as to differential Duties on the ships of such Foreign Powers.

X. Provided nevertheless, and be it enacted and declared, That the said recited Act doth not extend, and shall not be construed to extend, to grant to or to confer upon the trade or shipping of the said United States, or of the said Kingdom of Portugal, or of any other Foreign Power, or to the subjects of such States or Kingdom, or of any such Foreign Power as aforesaid, any other or greater advantage than such as shall have been stipulated for by and granted to the said United States, the said Kingdom of Portugal, or any such other Foreign Power, by the respective Treaties subsisting and in force between them respectively and Her Majesty, Her Heirs and Successors, or Her Royal Predecessors, but that the said Act shall be so construed and applied as to give full and complete effect to such respective Treaties so long as the same shall respectively remain in force, and is to provide such, and only such, indemnity as therein mentioned to such bodies politic and corporate, and other persons as are therein mentioned, for such losses as they shall respectively sustain by the execution of such respective Treaties.

XI. And for the prevention of uncertainty herein, be it enacted, That it shall and may be lawful for Her Majesty, Her Heirs and Successors, by any order or orders to be by Her or Them made, with the advice of Her or Their Privy Council, and published in the London Gazette, from time to time to declare what are the

Foreign Powers with which any such Treaty or Treaties as aforesaid is or are subsisting, and this present Act and the said recited Act shall apply and shall be deemed from the time of the ratification of any such Treaties to have been applicable to the trade and shipping of such Foreign Countries as shall be so mentioned in any such Order or Orders in Council as aforesaid, so long as any such Order or Orders shall continue unrevoked, and no longer.

XII. And be it enacted, That in any case where any Treaty is in force between Her Majesty and any Foreign State, containing any stipulations that no higher Duties or Charges shall be levied on the vessels or produce of such Foreign State, or upon goods exported or imported in the vessels of such Foreign State, than on British vessels or produce, or upon the like goods exported or imported in British vessels, or any direct or indirect stipulations to the like effect, or for the like objects, or any of them, it shall be lawful for the Commissioners of Her Majesty's Treasury, or any two or more of them, from time to time to give directions that all Duties or Charges imposed by any Act passed after the tenth day of *July* one thousand eight hundred and forty-two upon the vessels of such Foreign State entering or leaving any port of Her Majesty's dominions, or upon articles of the growth, produce, or manufacture of the dominions of such Foreign State, or upon any articles imported into the United Kingdom in vessels of such Foreign State, or upon any articles (or any particular classes of articles) exported from the United Kingdom (or exported from the United Kingdom to any particular place or places), shall be reduced to the same rates as are in the like cases imposed upon British vessels, or upon the like articles of British growth, produce, or manufacture, or upon the like articles imported into or exported from the United Kingdom in British vessels, or to give so much of the said directions as the case may require.

XIII. And be it enacted, That all manufactures of Gibraltar, Malta, and Heligoland, made of materials of foreign produce liable to Duty upon importation into the United Kingdom, upon which no such Duty has been paid, or upon which drawback of such Duty has been allowed in the United Kingdom, shall for the purposes of Duty, be deemed and taken to be the produce of and imported from a foreign country.

XIV. And whereas a Treaty has been concluded between Her Majesty and the United States of America, dated the ninth day of *August* in the year one thousand eight hundred and forty-two, whereby it is stipulated that all the produce of the forest in logs, lumber, timber, timber boards, staves, or shingles, or of agriculture not being manufactured, grown on any of those parts of the State of Maine watered by the river Saint John or by its tributaries, of which fact reasonable evidence shall, if required, be produced, shall have free access into and through the said river and its tributaries having their source within the State of Maine to and from the seaport at the mouth of the river Saint John, and to and round the falls of the said river, either by boats, rafts, or other conveyance, and that when within the province of New Brunswick the said produce shall be dealt with as if it were the produce of the said Province: And whereas it is the intention of the High Contracting parties to the said Treaty that the aforesaid produce should be dealt with as if it were the produce of the province of New Brunswick; be it therefore enacted, That the produce in the said recited Treaty and herein-before described shall, so far as regards all laws relating to duties, navigation, and customs in force in the United Kingdom, or in any of Her Majesty's dominions, be deemed and taken to be and be dealt with as the produce of the province of New Brunswick: Provided nevertheless, that in all cases in which declarations and certificates of production or origin, and certificates of clearance, would be required in respect of such produce if it were the produce of New Brunswick, similar declarations and certificates shall be required in respect of such produce, and shall state the same to be the produce of those parts of the state of Maine which are entered by the river Saint John or by its tributaries.

XV. And be it enacted, That upon the exportation from the United Kingdom of any foreign rice or paddy which shall have been cleaned therein, and which shall have paid the Duties payable on the importation thereof, there shall be allowed and paid for every hundred weight thereof a drawback equal in amount to the Duty paid on every four bushels of the rough rice or paddy from which the same shall have been cleaned.

XVI. Provided always, and be it enacted, That such drawback upon rice so exported shall be paid and allowed only upon such clean rice as shall be deposited for the purpose of exportation, within one calendar month from the day on which the duty thereon had been paid, in some warehouse in which rice may be warehoused on importation without payment of Duty, and shall there remain secured until duly shipped to be exported from such warehouse; Provided also, that the exporter of such rice shall make declaration before the collector or comptroller that the rice so warehoused for exportation was cleaned from the rough rice or paddy upon which the Duties had been so paid.

XVII. And be it enacted, That it shall be lawful for the importer of any goods subject to any Duties of Customs to warehouse such goods upon the first entry thereof, under the laws in force for the warehousing of goods, without payment of Duty upon such first entry, and that all goods which shall have been so warehoused before the commencement of any such Duties, and shall remain so warehoused after the commencement of the same, shall become liable to such Duties in lieu of all former Duties.

XVIII. And be it enacted, That for the purposes of this Act the Cape of Good Hope, and the territories and dependencies thereof, shall be deemed to be within the limits of the East India Company's charter, and the Island of Mauritius shall be deemed to be one of Her Majesty's sugar colonies, and placed upon the same footing in all respects as Her Majesty's islands in the West Indies.

XIX. And be it enacted, That all goods the produce of places within the limits of the East India Company's Charter having been imported into Malta or Gibraltar from those places in British ships shall, upon subsequent importation into the United Kingdom direct from Malta or Gibraltar, be liable to the same Duties as the like goods would respectively be liable to if imported direct from some place within the limits of the said Charter.

XX. And whereas by the consolidation of the different branches of the public revenue, and of the several Duties payable on the importation or exportation of goods, wares and merchandize, and the appropriation thereof, as directed by the several Acts in force in England, the hereditary and temporary revenues of the Crown of subsidies of tonnage and poundage, and of other Duties upon goods, wares, and merchandize arising in England are not now kept distinct and separate at the several offices, but have become blended with other Duties of Customs and tonnage both in the collection and appropriation thereof: And whereas it is expedient that provision should be made for ascertaining the annual amount of what such hereditary revenues would have produced in case the same had not been so consolidated, and that an account should hereafter be kept of such annual amount; be it therefore enacted, That from and after the passing of this Act, the Commissioners of Her Majesty's Treasury of the United Kingdom of Great Britain and Ireland for the time being, or any three or more of them, shall cause to be prepared and kept an account of what such hereditary revenue arising in England would have amounted to in case the same had not been and was not consolidated and collected with other Duties of Customs and tonnage in the collection and appropriation thereof, in such manner and form as shall appear to the said Commissioners of Her Majesty's Treasury for the time being best adapted to ascertain such amount, which account the said Commissioners for the time being are hereby required to make out, or cause to be made out, and laid before Parliament, together with the public accounts directed to be laid before Parliament, pursuant to the provisions of the several Acts for directing public accounts to be laid annually before Parliament.

XXI. Provided always, and be it enacted, That nothing in this Act contained shall extend or be construed to extend to affect or to alter the hereditary revenue of Her Majesty, Her Heirs and Successors, in Scotland, or other revenues there granted to His late Majesty King *George* the Second, during his life, and reserved to Her present Majesty during her life, by an Act passed in the first year of Her present Majesty's reign, but the same, and the civil establishment payable out of the same, shall continue to be paid in like manner as heretofore, any thing in this Act contained to the contrary notwithstanding.

XXII. And be it enacted, That all the monies arising by the Duties imposed by this Act (the necessary charges of raising and accounting for the same excepted) shall from time to time be paid into the receipt of Her Majesty's Exchequer in Great Britain and shall be carried to and made part of the Consolidated Fund of the United Kingdom of Great Britain and Ireland, except only as by this Act is specially provided, and shall be appropriated in like manner and to the same services as the Duties by this Act repealed would have been if this Act had not been passed.

XXIII. And be it enacted, That all monies arising from any Duties of Customs, or any arrears thereof, shall be raised, levied, collected, paid or received from and after the passing of this Act for or on account of any goods, wares, or merchandize whatever imported or brought into the United Kingdom of Great Britain and Ireland, or exported from the said United Kingdom, although the amount of the said Duties may have been computed and ascertained as such Duties have been computed and ascertained before the passing of this Act, and although the goods, wares, or merchandize whereon any such Duties of Customs may have been charged or may be charged may have been imported into or exported from the United Kingdom before the passing of this Act, and although any Duties of Customs due and payable, or charged or chargeable thereon, may have been secured by bond or otherwise on or before the passing of this Act; and all such monies shall from and after the passing of this Act be appropriated and applied, in like manner and to the same purposes, as the Duties of Customs by this Act granted are directed to be appropriated and applied, except as is in this Act provided, any Act or Acts of Parliament, law, usage, or custom, to the contrary notwithstanding; and that all monies arising by any of the revenues of Customs hereafter to be paid or allowed, either upon bond or otherwise, either by way of drawback, bounty, certificate, premium, or allowance, or by any other legal document whatever, from and after the passing of this Act, although the amount of the same shall have been computed and ascertained in like manner in which they have heretofore been usually computed and ascertained, or shall have become due before the passing of this Act, shall and may be paid or allowed in like manner by the proper officer or officers of the Customs out of any monies in their hands arising from the Duties of Customs respectively.

XXIV. And be it enacted, That this Act may be amended or repealed by any Act to be passed in this present Session of Parliament.

The alterations directed in this short Act are all embodied in the following Tariff.

ANNO NONO & DECIMO VICTORIÆ REGINÆ.

CAP. XXIII.

AN ACT TO ALTER CERTAIN DUTIES OF CUSTOMS.

[26th *June* 1846.]

WHEREAS by an Act passed in the Session of Parliament holden in the eighth and ninth years of the reign of Her present Majesty Queen Victoria, intituled *An Act for granting Duties of Customs,* the several Duties of Customs are imposed upon goods, wares, and merchandize, imported into or exported from the United Kingdom, as the same are respectively inserted, described and set forth in figures on the tables marked (A.) and (B.) to that Act annexed, together with the additional Duties therein-after mentioned: And whereas it is expedient to make certain alterations and amendments therein: Be it therefore enacted, by the Queen's most excellent Majesty, by and with the consent of the Lords spiritual and temporal, and Commons, in this present Parliament assembled, and by the authority of the same, That in lieu and instead of the duties now payable by law upon the goods, wares, and merchandize mentioned in the table to this Act annexed, when imported into the United Kingdom, there shall be raised, levied, collected, and paid unto Her Majesty, Her Heirs and Successors, upon the said goods, wares, and merchandize, when imported into the United Kingdom, the several Duties of Customs as the same are respectively inserted, described, and set forth in figures in the said last-mentioned table.

THE TARIFF.

SCHEDULE TO WHICH THE FOREGOING ACTS REFER.

DUTIES ON GOODS, WARES, AND MERCHANDIZE IMPORTED.

ARTICLES.		Rates of Duty.	
		Of or from Foreign Countries.	Of and from British Possessions.
		£. s. d.	£. s. d.
Agates or Cornelians, not set		Free.	Free.
——— set	for every 100*l.* value	10 0 0	10 0 0
Ale and beer, of all sorts	the barrel	1 0 0	1 0 0
Alganobilla seed		Free.	Free.
Alkali		—	—
Alkanet root		—	—
Almonds, not Jordan, nor bitter	the cwt.	0 10 0	0 10 0
——— Jordan	the cwt.	1 5 0	1 5 0
——— bitter		Free.	Free.
——— paste of	for every 100*l.* value	10 0 0	10 0 0
Aloes		Free.	Free.
Alum		—	—
—— rock		—	—
Amber, rough		—	—
——— manufactures of, not enumerated,	for every 100*l.* value	10 0 0	10 0 0
Ambergris		Free.	Free.
Amboyna wood		—	—
Anchovies	the lb.	0 0 2	—
Angelica		Free.	—
Animals (living), viz.			
——— asses		—	—
——— goats		—	—
——— kids		—	—
——— oxen and bulls		—	—
——— cows		—	—
——— calves		—	—
——— horses, mares, geldings, colts, foals		—	—
——— mules		—	—
——— sheep		—	—
——— lambs		—	—
——— swine and hogs		—	—
——— pigs (sucking)		—	—
Annatto roll and flag		—	—
Antimony, *viz.*			
——— Ore of		—	—
——— Crude		—	—
——— Regulus		—	—
Apples, raw	the bushel	0 0 6	0 0 2
——— dried	the bushel	0 2 0	0 2 0
Aquafortis	the cwt.	0 5 0	0 5 0
Argol		Free.	Free.
Aristolochia		—	—
Arrowroot	the cwt.	0 2 6	0 0 6

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Arsenic	Free.	Free.
Ashes, *viz.*		
——— pearl and pot	—	—
——— soap, weed, and wood	—	—
——— not enumerated	—	—
Asphaltum or Bitumen Judaicum	—	—
Bacon	—	—
Balsams, unenumerated	—	—
Bandstring twist for every 100*l.* value	10 0 0	5 0 0
Barilla	Free.	Free.
Bark	—	—
Bark, Extract of, or other vegetable substances to be used only for tanning leather	—	—
Barley, pearled the cwt.	0 1 0	0 0 6
Barwood	Free.	Free.
Basket rods, peeled and unpeeled	—	—
Baskets for every 100*l.* value.	10 0 0	10 0 0
Bast ropes, twines, and strands for every 100*l.* value	10 0 0	5 0 0
Beads, *viz.*		
——— arango for every 100*l.* of the value	10 0 0	10 0 0
——— coral for every 100*l.* of the value	10 0 0	10 0 0
——— crystal for every 100*l.* of the value	10 0 0	10 0 0
——— jet for every 100*l.* of the value	10 0 0	10 0 0
——— not otherwise enumerated or described, for every 100*l.* of the value	10 0 0	10 0 0
Beans, kidney and French	Free.	Free.
Beef, salted (not being corned beef)	—	—
—— fresh, or slightly salted	—	—
Beef wood	—	—
Beer or mum the barrel	1 0 0	1 0 0
—— spruce the barrel	1 0 0	1 0 0
Berries, unenumerated	Free.	Free.
Birds, *viz.*, singing birds	—	—
Bitumen Judaicum	—	—
Blacking for every 100*l.* value	10 0 0	10 0 0
Black wood	Free.	Free.
Bladders	—	—
Bones of cattle and other animals, and of fish (except whale fins), whether burnt or not, or as animal charcoal	—	—
Books, *viz.*		
——— being of Editions printed prior to the year 1801, bound or unbound the cwt.	1 0 0	1 0 0
——— being of editions printed in or since the year 1801, bound or unbound the cwt.	5 0 0	5 0 0
——— being of editions in the foreign living languages, printed in or since the year 1801, bound and unbound the cwt.	2 10 0	2 10 0
Boots, see Leather Manufactures		
Boracic acid	Free.	Free.
Borax, refined	—	—
Borax or tincal, unrefined	—	—
Bottles, of earth and stone, empty	—	—
——— full	—	—
——— flasks in which olive oil is imported	—	—

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Boxes of all sorts, except those made wholly or partly of glass, on which the proper glass duty will be levied . . for every 100*l.* value	10 0 0	5 0 0
Box wood	Free.	Free.
Brass, manufactures of . for every 100*l.* value	10 0 0	10 0 0
—— powder of . for every 100*l.* value	10 0 0	10 0 0
Brazil wood	Free.	Free.
Brazilleto wood	—	—
Bricks or clinkers (Dutch) . . the 1,000	0 10 0	0 5 0
—— other sorts . . the 1,000	0 15 0	0 7 6
Brimstone	Free.	Free.
—— refined, in rolls	—	—
—— in flour	—	—
Bristles, rough, or in any way sorted	—	—
Brocade of gold or silver for every 100*l.* value	10 0 0	10 0 0
Bronze, all works of art	Free.	Free.
—— other manufactures of, not particularly enumerated . for every 100*l.* value	10 0 0	10 0 0
—— powder . . for every 100*l.* value	10 0 0	10 0 0
Buckwheat . . . the quarter	0 1 0	0 1 0
—— meal . . . the cwt.	0 0 4½	0 0 4½
Bullion and foreign coin, of gold or silver, and ore of gold or silver, or of which the major part in value is gold or silver	Free.	Free.
Bull rushes	—	—
Butter . the cwt.	0 10 0	0 2 6
Buttons (metal) . . for every 100*l.* value	10 0 0	10 0 0
Cables (not being iron cables), tarred or untarred, the cwt.	0 6 0	0 3 0
—— not being iron cables, in actual use of a British ship, and being fit and necessary for such ship, and not or until otherwise disposed of	Free.	Free.
—— if and when otherwise disposed of, for every 100*l.* value	10 0 0	5 0 0
—— old, and taken from foreign ships, provided the same be rendered unserviceable by reduction into lengths not exceeding three fathoms for every 100*l.* value	10 0 0	
Cameos . . for every 100*l.* value	5 0 0	5 0 0
Camomile flowers	Free.	Free.
Camphor, unrefined	—	—
—— refined . the cwt.	0 5 0	0 5 0
Camwood	Free.	Free.
Candles, *viz.*		
—— spermaceti . the lb.	0 0 3	0 0 3
—— stearine . the lb.	0 0 1¼	0 0 1¼
—— tallow . the cwt.	0 5 0	0 5 0
—— wax . the lb.	0 0 2	0 0 2
Candlewick	Free.	Free.
Canella alba	—	—
Canes, *viz.*		
—— bamboo	—	—
—— rattans, not ground	—	—
—— reed canes	—	—
—— walking canes or sticks mounted, painted, or otherwise ornamented for every 100*l.* value	10 0 0	10 0 0

ARTICLES.		Of or from Foreign Countries.	Of and from British Possessions.
Canes or sticks, unenumerated		Free.	Free.
Cantharides	the lb.	0 0 3	0 0 3
Caoutchouc		Free.	Free.
Capers, including the pickle	the lb.	0 0 6	0 0 3
Cardamons		Free.	Free.
Cards, *viz.*, playing cards	the dozen packs	4 0 0	4 0 0
Carmine	the oz.	0 0 6	0 0 6
Carriages of all sorts	for every 100*l.* value	10 0 0	10 0 0
Casks (empty)	for every 100*l.* value	10 0 0	10 0 0
Cassava powder	the cwt.	0 2 6	0 0 6
Cassia, *viz.*			
——— buds		Free.	Free.
——— fistula		—	—
——— lignea	the lb.	0 0 3	0 0 1
Castor		Free.	Free.
Casts of busts, statues, or figures		—	—
Catlings	for every 100*l.* value	10 0 0	10 0 0
Caviare		Free.	Free.
Cedar wood		—	—
Chalk, *viz.*			
——— unmanufactured		—	—
——— prepared or manufactured, and not otherwise enumerated	for every 100*l.* value	10 0 0	5 0 0
Cheese	the cwt.	0 5 0	0 1 6
Cherries, raw	for every 100*l.* value	5 0 0	5 0 0
——— dried	the lb.	0 0 6	0 0 6
Chicory, or any other vegetable matter applicable to the uses of chicory or coffee, *viz*			
——— roasted or ground	the lb.	0 0 6	0 0 6
——— raw or kiln-dried	the cwt.	1 0 0	1 0 0
China root		Free.	Free.
China or porcelain ware, plain	for every 100*l.* value	10 0 0	10 0 0
——— painted, gilt, ornamented	for every 100*l.* value	10 0 0	10 0 0
Chip or willow for platting		Free.	Free.
Cider	the tun	5 5 0	5 5 0
Cinnabaris Nativa		Free.	Free.
Cinnamon	the lb.	0 0 6	0 0 3
Citrat of lime		Free.	Free.
Citric acid		—	—
Citron, preserved with salt	for every 100*l.* value	5 0 0	5 0 0
Civet		Free.	Free.
Clocks	for every 100*l.* value	10 0 0	10 0 0
——— or watches of any metal, impressed with any mark or stamp appearing to be, or to represent any legal British assay mark or stamp, or purporting, by any mark or appearance, to be of the manufacture of the United Kingdom		Prohibited	Prohibited.
Cloves	the lb.	0 0 6	0 0
Coals, culm, or cinders		Free.	Free.
Cobalt		—	—
——— ore		—	—
Cochineal and granilla		—	—
——— dust		—	—
Cocoa	the lb.	0 0 2	0 0 1
——— husks and shell	the lb.	0 0 1	0 0 ½

ARTICLES.		Of or from Foreign Countries.	Of and from British Possessions.
Cocoa—*continued.*			
—— paste, or chocolate	the lb.	0 0 6	0 0 2
Coculus Indicus	the cwt.	0 7 6	0 7 6
Coffee	the lb.	0 0 6	0 0 4
Coir rope, twine, and strands	the cwt.	0 2 6	0 1 3
—— rope and junk, old and new, cut into lengths not exceeding 3 feet each		Free.	Free.
Colocynth		—	—
Columba root		—	—
Comfits, dry	the lb.	0 0 6	0 0 3
Confectionery	the lb.	0 0 6	0 0 6
Copper, ore of, *viz.*			
—— containing not more than 15 parts of copper in 100 parts of ore	per ton of metal	3 0 0	1 0 0
—— containing not more than 20 parts of copper in 100 parts of ore	per ton of metal	4 10 0	1 0 0
—— containing more than 20 parts of copper in 100 parts of ore	per ton of metal	6 0 0	1 0 0
—— old, fit only to be re-manufactured	the cwt.	0 7 6	0 3 6
—— unwrought, *viz.*, in bricks or pigs, rose copper, and all cast copper	the cwt.	0 8 9	0 4 0
—— in part wrought, *viz.* bars, rods, or ingots, hammered or raised	the cwt.	0 10 0	0 5 0
—— in plates and copper coin	the cwt.	0 10 0	0 5 0
—— manufactures of copper, not otherwise enumerated or described, and copper plates engraved	for every 100*l.* value	10 0 0	10 0 0
—— copper or brass wire	for every 100*l.* value	10 0 0	10 0 0
Copperas, blue		Free.	Free.
—— green		—	—
—— white		—	—
Coral, *viz.*			
—— in fragments		—	—
—— whole, polished		—	—
—— unpolished		—	—
Cordage, tarred or untarred (standing or running rigging in use excepted)	the cwt.	0 6 0	0 3 0
—— in actual use of a British ship, and being fit and necessary for such ship, and not or until otherwise disposed of		Free.	Free.
—— if and when otherwise disposed of,	for every 100*l.* value	5 0 0	2 10 0
Cork		Free.	Free.
Corks, ready made	the lb.	0 0 8	0 0 8
—— squared for rounding	the cwt.	0 16 0	0 16 0
—— fishermen's	the cwt.	0 2 0	0 2 0
Corn, until Feb. 1, 1849, *viz.*			
Wheat.—Whenever the average price of wheat, made up and published in the manner required by law, shall be, for every quarter			
Under 48*s*, the duty shall be, for every quarter		0 10 0	
	48*s* and under 49*s*	0 9 0	
	49*s* ,, 50*s*	0 8 0	
	50*s* ,, 51*s*	0 7 0	
	51*s* ,, 52*s*	0 6 0	
	52*s* ,, 53*s*	0 5 0	
	53*s* and upwards	0 4 0	

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Corn—*continued*.		
Barley.—Whenever the average price of barley, made up and published in the manner required by law, shall be, for every quarter		
Under 26*s*, the duty shall be, for every quarter	0 5 0	
26*s* and under 27*s*	0 4 6	
27*s* ,, 28*s*	0 4 0	
28*s* ,, 29*s*	0 3 6	
29*s* ,, 30*s*	0 3 0	
30*s* ,, 31*s*	0 2 6	
31*s* and upwards	0 2 0	
Oats.—Whenever the average price of oats, made up and published in the manner required by law, shall be, for every quarter		
Under 18*s*, the duty shall be, for every quarter	0 4 0	
18*s* and under 19*s*	0 3 6	
19*s* ,, 20*s*	0 3 0	
20*s* ,, 21*s*	0 2 6	
21*s* ,, 22*s*	0 2 0	
22*s* and upwards	0 1 6	
Rye, Pease, and Beans.—For every quarter; a duty equal in amount to the duty payable on a quarter of barley.		
Wheat, Meal, and Flour.—For every barrel, being 196 lbs.; a duty equal in amount to the duty payable on 38½ gallons of wheat		
Barley Meal.—For every quantity of 217½ lbs.; a duty equal in amount to the duty payable on a quarter of barley.		
Oatmeal and Groats.—For every quantity of 181½ lbs.; a duty equal in amount to the duty payable on a quarter of oats.		
Rye, Meal, and Flour.—For every barrel, being 196 lbs.; a duty equal in amount to the duty payable on 40 gallons of rye.		
Pea Meal and Bean Meal.—For every quantity of 272 lbs.; a duty equal in amount to the duty payable on a quarter of pease or beans.		
If the produce of and imported from any British possession out of Europe—		
Wheat, barley, beer or bigg, oats, rye, pease and beans . . . . the qr.		0 1 0
Wheat meal, barley meal, oat meal, rye meal, pea meal and bean meal . . the cwt.		0 0 4½
Cotton, yarn	Free.	Free.
——— articles or manufactures of cotton, wholly or in part made up, not otherwise charged with duty for every 100*l.* value	10 0 0	5 0 0
Cranberries	Free.	Free.
Crayons . . for every 100*l.* value	10 0 0	0 10 0
Cream of tartar	Free.	Free.
Crystal, *viz.*		
——— rough	—	—
——— cut or manufactured for every 100*l.* value	10 0 0	0 10 0
Cubebs	Free.	Free.
Cucumbers, *viz.*, preserved for every 100*l.* value	5 0 0	2 10 0

ARTICLES.		Of or from Foreign Countries.	Of and from British Possessions.
Currants	the cwt.	0 15 0	0 15 0
Cutch		Free.	Free.
Dates	the cwt.	0 10 0	0 10 0
Diamonds		Free.	Free.
Dice	the pair	1 6 2	1 6 2
Divi Divi		Free.	Free.
Down		—	—
Drugs, not enumerated		—	—
Earthenware, not otherwise enumerated or described	for every 100*l.* value	10 0 0	10 0 0
Ebony		Free.	Free.
Eggs	the 120	0 0 10	0 0 2½
Embroidery and needlework	for every 100*l.* value	20 0 0	20 0 0
Enamel		Free.	Free.
Essences not otherwise described, *viz.*			
Extract of Cardamoms	for every 100*l.* value	20 0 0	20 0 0
—— Cocculus Indicus	for every 100*l.* value	20 0 0	20 0 0
—— Guinea grains of paradise,	for every 100*l.* value	20 0 0	20 0 0
—— Licorice	for every 100*l.* value	20 0 0	20 0 0
—— Nux vomica	for every 100*l.* value	20 0 0	20 0 0
—— Opium	for every 100*l.* value	20 0 0	20 0 0
—— Guinea Pepper	for every 100*l.* value	20 0 0	20 0 0
—— Peruvian or Jesuit's bark,	for every 100*l.* value	20 0 0	20 0 0
—— Quassia	for every 100*l.* value	20 0 0	20 0 0
—— Radix Rhataniæ	for every 100*l.* value	20 0 0	20 0 0
—— Vitriol	for every 100*l.* value	20 0 0	20 0 0
Extract or preparation of any article, not being particularly enumerated or described, nor otherwise charged with duty	for every 100*l.* value	20 0 0	20 0 0
Or, and in lieu of the above duty, at the option of the Importer	the lb.	0 5 0	0 5 0
Essence of spruce	for every 100*l.* value	10 0 0	10 0 0
Feathers for beds, in beds or otherwise		Free.	Free.
—— Ostrich, dressed	the lb.	1 10 0	1 10 0
—— —— undressed		Free.	Free.
—— not otherwise enumerated or described, *viz.*			
—— dressed	for every 100*l.* value	10 0 0	10 0 0
—— undressed		Free.	Free.
—— paddy bird	the lb.	0 1 0	0 1 0
—— —— undressed		Free.	Free.
Figs	the cwt.	0 15 0	0 15 0
Fish, *viz.*			
—— eels	the ship's lading	13 0 0	
—— lobsters		Free.	
—— turbots	the cwt.	0 5 0	
—— of foreign taking, imported from foreign places in other than fishing vessels, *viz,*			
—— oysters	the bushel	0 1 6	
—— salmon	the cwt.	0 10 0	
—— soles	the cwt.	0 5 0	
—— turtle	the cwt.	0 5 0	

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Fish—*continued.*		
—— fresh, not otherwise enumerated . the cwt.	0 1 0	
—— cured, not otherwise enumerated . the cwt.	0 1 0	
—— of British taking, fresh or cured . .	Free.	Free.
Flasks in which olive oil is imported . . .	—	—
Flax and tow or codilla of hemp or flax, whether dressed or undressed	—	—
Flocks	—	—
Flower roots	—	—
Flowers, artificial, not made of silk, for every 100*l.* value	25 0 0	25 0 0
Frames for pictures, prints, or drawings, for every 100*l.* value	10 0 0	10 0 0
Fruit, *viz.*, raw, and not otherwise enumerated, for every 100*l.* value	5 0 0	5 0 0
Fustic	Free.	Free.
Gallic powder	—	—
Galls	—	—
Gamboge	—	—
Garnets, cut, uncut, not set	—	—
Garancine	—	—
Gauze of thread . for every 100*l.* value	10 0 0	5 0 0
Gelantine	Free.	Free.
Gentian	—	—
Ginger . . . . the cwt.	0 10 0	0 5 0
——— preserved . . . . the lb.	0 0 6	0 0 1
Ginseng	Free.	Free.
Glass, *viz.*		
From and after the 10th day of October 1846, and until the 5th of April 1848, the following duties of customs:—		
——— any kind of window glass, white or stained of one colour only, not exceeding one ninth of an inch in thickness, and shades and cylinders the cwt.	0 7 0	
——— all glass exceeding one ninth of an inch in thickness, all silvered or polished glass of whatever thickness, however small each pane, plate, or sheet, superficial measure, *viz.*		
——— not exceeding more than nine square feet, the square foot	0 0 6	
——— containing more than nine square feet, and not more than fourteen square feet the square foot	0 1 0	
——— containing more than fourteen square feet, and not more than thirty-six square feet the square foot	0 1 3	
——— containing more than thirty six square feet the square foot	0 1 6	
——— painted or otherwise ornamented the superficial foot	0 1 6	
——— all white flint glass bottles, not cut, engraved, or otherwise ornamented, and beads and bugles of glass . . the lb.	0 0 1	
——— wine glasses, tumblers, and all other white flint glass goods, not cut, engraved, or otherwise ornamented . . the lb.	0 0 2	

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Glass—*continued.*		
—— all flint cut glass, flint coloured glass, and fancy ornamental glass, of whatever kind the lb.	0 0 4	
—— bottles of glass covered with wicker (not being flint or cut glass), or of green or common glass . . . the cwt.	0 1 6	
—— manufactures, not otherwise enumerated or described, and old broken glass, fit only to be remanufactured . the cwt.	0 7 0	
And from and after the 5th day of April 1848, there shall be charged on the said article one half of the said duties.		
Gloves, see Leather Manufactures		
Glue	Free.	Free.
—— clippings or waste of any kind, fit only for glue	—	—
Gold, leaves of . . . the 100	0 3 0	0 3 0
Grains, guinea and paradise . . the cwt.	0 15 0	0 15 0
Grapes . . for every 100*l.* value	5 0 0	5 0 0
Grease	Free.	Free.
Greaves, for dogs	—	—
—— Tallow	—	—
Guano	—	—
Gum, unenumerated . . .	—	—
Gunpowder . . . . the cwt.	1 0 0	1 0 0
Gun Stocks in the rough, of wood . .	Free.	Free.
Gypsum	—	—
Hair, *viz.*		
—— camel's hair or wool	—	—
—— cow, ox, bull, or elk hair	—	—
—— goat's hair or wool	—	—
—— horse hair	—	—
—— human	—	—
—— unenumerated	—	—
—— manufactures of hair or goat's wool, or of hair or goat's wool and any other material, and articles of such manufacture wholly or in part made up, not particularly enumerated or otherwise charged with duty . for every 100*l.* value	10 0 0	5 0 0
Hams of all kinds . . . the cwt.	0 7 0	0 2 0
Harp strings, or lute strings silvered, for every 100*l.* value	10 0 0	10 0 0
Hats or bonnets, *viz.*		
—— of chip . . the lb.	0 3 6	0 3 6
—— bast, cane, or horse-hair hats bonnets, each hat or bonnet not exceeding 22 inches in diameter the dozen	0 7 6	0 7 6
—— each hat or bonnet exceeding 22 inches in diameter . the dozen	0 10 0	0 10 0
—— straw hats or bonnets . the lb.	0 5 0	0 5 0
Hats, felt, hair, wool, or beaver hats . . each	0 2 0	0 2 0
—— made of silk, silk shag laid upon felt, linen or other material . . . each	0 2 0	0 2 0
Hay	Free.	Free.
Heath, for brushes	—	—
Hellebore	—	—

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Hemp, dressed	Free.	Free.
—— rough or undressed, or any other vegetable substance of the nature and quality of undressed hemp, and applicable to the same purpose	—	—
Hides, tawed, curried, varnished, japanned, or enamelled	—	—
—— Muscovy or Russia hides, or pieces thereof, tanned, coloured, shaved, or otherwise dressed, and hides or pieces thereof in any way dressed, not otherwise enumerated	—	—
—— tails, buffalo, bull, cow, or ox	—	—
Hides tanned, not otherwise dressed	—	—
Hones	—	—
Honey . . . . . the cwt.	0 10 0	0 5 0
Hoofs of cattle	Free.	Free.
Hoops of wood	—	—
Hops . . . . the cwt.	2 5 0	2 5 0
Horns, horn tips, and pieces of horn	Free.	Free.
Indigo	—	—
Ink, for printers	—	—
Inkle, unwrought	—	—
—— wrought	—	—
Iron, ore of	—	—
—— pig	—	—
—— bars, unwrought	—	—
—— old broken and cast iron	—	—
—— and steel, wrought, not otherwise enumerated, for every 100*l.* value	10 0 0	10 0 0
—— bloom	Free.	Free.
—— chromate of	—	—
—— slit or hammered into rods	—	—
—— cast	—	—
—— hoops	—	—
Isinglass . . . . . the cwt.	0 5 0	0 5 0
Jalap	Free.	Free.
Japanned or lacquered ware for every 100*l.* value	10 0 0	10 0 0
Jet	Free.	Free.
Jewels, emeralds, and all other precious stones, *viz.*		
—— unset	—	—
—— set . . for every 100*l.* value	10 0 0	10 0 0
Juice of lemons, limes, or oranges	Free.	Free.
Kingwood	—	—
Kernels of walnuts and kernels of peach stones, commonly used for expressing oil therefrom	—	—
Lac, *viz.*, stick lac	—	—
Lace, *viz.*		
—— thread . . for every 100*l.* value	10 0 0	10 0 0
—— made by the hand, commonly called cushion or pillow lace, whether of linen, cotton, or silken thread . . for every 100*l.* value	10 0 0	10 0 0
Lamp black	Free.	Free.
Lapis calaminaris	—	—
Lard	—	—

ARTICLES.	Or or from Foreign Countries.	Of and from British Possessions.
Latten	Free.	Free.
——— shaven	—	—
——— wire . . for every 100*l.* value	10 0 0	10 0 0
Lavender flowers	Free.	Free.
Lead, ore of	—	—
——— black	—	—
——— pig and sheet . . the ton	1 0 0	0 5 0
——— red	Free.	Free.
——— white	—	—
——— chromate of	—	—
——— manufactures of, not otherwise enumerated, for every 100*l.* value	10 0 0	10 0 0
Leather manufactures, *viz.*		
Boots, shoes, and calashes, *viz.*		
—— women's boots and calashes . the dozen pairs	0 6 0	0 6 0
—— ——— if lined or trimmed with fur or other trimming . the dozen pairs	0 7 6	0 7 6
—— ——— shoes with cork or double soles, quilted shoes and clogs . the dozen pairs	0 5 0	0 5 0
—— ——— if trimmed or lined with fur or any other trimming . the dozen pairs	0 6 0	0 6 0
—— women's shoes of silk, satin, jean, or other stuffs, kid, morocco, or other leather, the dozen pairs	0 4 6	0 4 6
—— ——— if trimmed or lined with fur or any other trimming . the dozen pairs	0 5 0	0 5 0
—— girls boots, shoes, and calashes, not exceeding seven inches in length, to be charged with two thirds of the above duties		
—— men's boots . . the dozen pairs	0 14 0	0 14 0
—— —— shoes . . . the dozen pairs	0 7 0	0 7 0
—— boys boots and shoes, not exceeding seven inches in length, to be charged with two thirds of the above duties		
—— boot fronts, not exceeding nine inches in height, the dozen pairs	0 1 9	0 1 9
—— ——— exceeding nine inches in height, the dozen pairs	0 2 9	0 2 9
—— cut into shapes, or any article made of leather, or any manufacture whereof leather is the most valuable part, not otherwise enumerated or described . . for ever 100*l.* value	10 0 0	10 0 0
—— gloves of leather, *viz.*		
—— habit mitts . . the dozen pairs	0 2 4	0 2 4
—— ——— gloves . the dozen pairs	0 3 6	0 3 6
—— men's gloves . . the dozen pairs	0 3 6	0 3 6
—— women's gloves or mitts the dozen pairs	0 4 6	0 4 6
Leaves of roses	Free.	Free.
Leeches	—	—
Lentils	—	—
Lignum Vitæ	—	—
Linen, or linen and cotton, *viz.*		
——— cambrics and lawns, commonly called French lawns, the piece not exceeding eight yards in length, and not exceeding seven eighths of a yard in breadth, and so in proportion for any greater or less quantity.		

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Linen, or linen and cotton—*continued.*		
———— plain . . . the piece	0 2 6	0 2 6
———— bordered handkerchiefs . the piece	0 2 6	0 2 6
——— lawns of any sort, not French, for every 100*l.* value	10 0 0	10 0 0
——— damasks . . the square yard	0 0 5	0 0 5
——— damask diaper . the square yard	0 0 2½	0 0 2½
——— plain linens and diaper, not otherwise enumerated or described, and whether chequered or striped with dye yarn or not	Free.	Free.
——— sails . . for every 100*l.* value	15 0 0	15 0 0
——— in actual use of a British ship, and fit and necessary for such ship, and not otherwise disposed of	Free.	Free.
——— sails, if and when otherwise disposed of, for every 100*l.* value	10 0 0	10 0 0
——— manufactures of linen, or of linen mixed with cotton or with wool, not particularly enumerated or otherwise charged with Duty for every 100*l.* value	10 0 0	10 0 0
——— manufactures of linen, or of linen mixed with cotton, or with wool, not particularly enumerated or otherwise charged with Duty, not being articles wholly or in part made up	Free.	Free.
Liquorice roots . . . . the cwt.	1 0 0	0 10 0
——— paste . . . . the cwt.	1 0 0	0 10 0
——— juice . . . . the cwt.	1 0 0	0 10 0
——— powder . . . the cwt.	1 15 0	0 15 0
Litharge	Free.	Free.
Live creatures illustrative of Natural History .	—	—
Logwood	—	—
Maccaroni and Vermicelli . . . the lb.	0 0 1	0 0 1
Mace . . . . . . the lb.	0 2 6	0 2 6
Madder	Free.	Free.
——— root	—	—
Magna Græcia ware	—	—
Mahogany	—	—
Maize or Indian corn . . . the quarter	0 1 0	0 1 0
——— meal . . . . the cwt.	0 0 4½	0 0 4½
Manganese ore	Free.	Free.
Manna	—	—
Manures not enumerated	—	—
Manuscripts	—	—
Maps or charts, or parts thereof, plain or coloured .	—	—
Maple wood	—	—
Marmalade . . . . the lb.	0 0 0	0 0 1
Mats and matting . for every 100*l.* value	5 0 0	2 10 0
Mattresses . . for every 100*l.* value	10 0 0	10 0 0
Mead . . . . the gallon	0 5 6	0 5 6
Meat, salted or fresh, not otherwise described . .	Free.	Free.
Medals of any sort	—	—
Medlars . . . . . the bushel	0 1 0	0 0 6
Mercury, prepared . for every 100*l.* value	10 0 0	10 0 0
Metal, *viz.*		
——— Bell	Free.	Free.
——— Leaf (except leaf gold), the packet containing 250 leaves	0 0 1	0 0 1

ARTICLES.		Of or from Foreign Countries.	Of and from British Possessions.
Mill boards	the cwt.	1 10 0	1 10 0
Minerals and Fossils unenumerated		Free.	Free.
Models of cork or wood		—	—
Morphia, and its salts	the lb.	0 5 0	0 5 0
Moss, *viz.*			
—— Lichen islandicus		Free.	Free.
—— Rock, for dyers use		—	—
—— other than rock or Iceland moss		—	—
Mother-o'-pearl shells		—	—
Musical instruments	for every 100*l.* value	10 0 0	10 0 0
Musk		Free.	Free.
Mustard flour	the cwt.	0 6 0	0 6 0
Myrobolane berries		Free.	Free.
Myrrh		—	—
Nicaragua wood		—	—
Nitre, *viz.*, cubic nitre		—	—
Nickel, ore of		—	—
——— Metallic and oxide of, refined		—	—
——— Arseniate of, in lumps or powder, being in an unrefined state		—	—
Nutmegs	the lb.	0 3 6	0 2 6
——— wild, in the shell	the lb.	0 0 3	0 0 3
Nuts, *viz.*			
—— Chesnuts		Free.	Free.
—— Coco nuts		—	—
—— Pistachio nuts		—	—
—— small nuts	the bushel	0 2 0	0 2 0
—— Walnuts	the bushel	0 2 0	0 2 0
—— Nuts and kernals unenumerated		Free.	Free.
—— Nuts and kernals of walnuts, of peach stones, and all nuts and kernals unenumerated, commonly used for expressing oil therefrom		—	—
Nux vomica	the cwt.	0 5 0	0 5 0
Oakum		Free.	Free.
Ochre		—	—
Oil of almonds	the lb.	0 0 2	0 0 2
— Bays	the lb.	0 0 2	0 0 2
— Animal		Free.	Free.
— Castor		—	—
— Chemical, essential, or perfumed	the lb.	0 1 0	0 1 0
— of cloves	the lb.	0 3 0	0 3 0
— Lard		Free.	Free.
— Cocoa nut		—	—
— Linseed		—	—
— Hempseed and Rapeseed		—	—
— Olive		—	—
— Palm		—	—
— Paran		—	—
— Rock		—	—
— Seed, unenumerated		—	—
— Train, blubber, and spermacetti, oil and head matter, the produce of fish or creatures living in the sea, caught by the crews of British vessels, and imported direct from the fishery, or from any British possion, in a British vessel		—	—
— Train and blubber, the produce of fish or creatures living in the sea, of foreign fishing	the tun	6 0 0	

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Oil—*continued*		
— Train oil or blubber of foreign fishing, from and after the 1st January 1847 . . the tun	Free.	—
— Spermaceti of foreign fishing . . the tun	15 0 0	
——————— from and after 1st January 1849 . .	Free.	—
— Walnut	—	—
— or spirit of turpentine . . the cwt.	0 5 0	0 2 6
— not particularly enumerated or described, nor otherwise charged with duty	Free.	Free.
— seed cake	—	—
Olibanum	—	—
Olives . . . the gallon	0 2 0	0 2 0
Olive wood	Free.	Free.
Onions . . . the bushel	0 0 6	0 0 3
Opium . . . . the lb.	0 1 0	0 1 0
Orange flower water . . . the lb.	0 0 1	0 0 1
Oranges and Lemons, *viz.*		
——— in chests and boxes not exceeding 5,000 cubic inches . . . the box	0 2 6	0 2 6
——— over 5,000 cubic inches, and not exceeding 7,300 . . . the box	0 3 9	0 3 9
——— over 7,300 cubic inches, and not exceeding 14,000 . . . the box	0 7 6	0 7 6
——— for every 1,000 cubic inches exceeding 14,000	0 0 7½	0 0 7½
——— loose . . . the 1000	0 15 0	0 15 0
——— entered at value at the option of the importer, for every 100*l.* value	75 0 0	75 0 0
——————— peel	Free.	Free.
Orchal	—	—
Ore, unenumerated	—	—
Orpiment	—	—
Orris root	—	—
Orsedew . . . . . the cwt.	0 10 0	0 10 0
Painters' colours, unenumerated		
——————— unmanufactured	Free.	Free.
——————— manufactured for every 100*l.* value	10 0 0	10 0 0
Palmetto thatch	Free.	Free.
——————— manufactures of ditto, . .	—	—
Paper, *viz.*		
——— brown, made of old rope or cordage only, without separating or extracting the pitch or tar therefrom, and without any mixture of other material therewith . . . the lb.	0 0 3	0 0 3
——— printed, painted, or stained paper, or paper hangings, or flock paper the square yard	0 0 2	0 0 2
— — waste, unless printed on in the English language, or paper of any other sort not particularly enumerated or described, nor otherwise charged with duty . . the lb.	0 0 4½	0 0 4½
——— printed on in the English language . .	Prohibited	Prohibited
Parchment	Free.	Free.
Pasteboards . . . . . the cwt.	1 10 0	1 10 0
Pearls	Free.	Free.
Pears, raw . . . . the bushel	0 0 6	0 0 3
——- dried . . . . the bushel	0 2 0	0 2 0

ARTICLES.		Of or from Foreign Countries.	Of and from British Possessions.
Pencils	for every 100*l.* value	10 0 0	10 0 0
——— of slate	for every 100*l.* value	10 0 0	10 0 0
Pens		Free.	Free.
Pepper, of all sorts	the lb.	0 0 6	0 0 6
Percussion caps	the 1000	0 0 4	0 0 4
Perfumery, not otherwise charged	for every 100*l.* value	10 0 0	10 0 0
Perry	the tun	5 5 0	5 5 0
Pewter, manufactures of	for every 100*l.* value	10 0 0	10 0 0
Phosphorus	for every 100*l.* value	10 0 0	10 0 0
Pickles preserved in vinegar	the gallon	0 0 4	0 0 4
——— or vegetables preserved in salt,	for every 100*l.* value	5 0 0	5 0 0
Pictures	each	0 1 0	0 1 0
——— and further	the square foot	0 1 0	0 1 0
——— above 200 square feet	each	10 0 0	10 0 0
Pimento	the cwt.	0 5 0	0 5 0
Pink root		Free.	Free.
Pitch		—	—
—— Burgundy		—	—
Plantains		—	—
Plants, shrubs, and trees, alive		—	—
Plaster of Paris		—	—
Plate of gold	for every 100*l.* value	10 0 0 together with the Stamp Duty.	10 0 0 together with the Stamp Duty.
—— silver, gilt and ungilt	for every 100*l.* value	10 0 0 together with the Stamp Duty.	10 0 0 together with the Stamp Duty.
—— battered		Free.	Free.
—— wire, gilt or plated	for every 100*l.* value	10 0 0	10 0 0
———— silver	for every 100*l.* value	10 0 0	10 0 0
Platina, and ore of		Free.	Free.
Platting, or other manufactures to be used in, or proper for making hats or bonnets, *viz.*			
——— of bast, cane, or horse hair	the lb.	0 10 0	0 10 0
——— of chip		Free.	Free.
Platting of straw	the lb.	0 5 0	0 5 0
Plums, dried or preserved	the cwt.	1 7 6	1 7 6
——— commonly called French plums and prunelloes	the cwt.	1 0 0	1 0 0
——— preserved in sugar	the lb.	0 0 6	0 0 6
Pomatum	for every 100*l.* value	10 0 0	10 0 0
Pomegranates	the 1,000	0 5 0	0 5 0
———— peel of		Free.	Free.
Pork, salted (not hams)		—	—
——— fresh		—	—
Potatoes		—	—
Potato flour	the cwt.	0 1 0	0 1 0
Pots, *viz.*			
—— melting, for goldsmiths	the 100	0 3 2	0 3 2
—— of stone	for every 100*l.* value	10 0 0	10 0 0
Powder, *viz.*			
——— hair	the cwt.	1 0 0	1 0 0
——— perfumed	the cwt.	1 0 0	1 0 0
——— not otherwise enumerated or described, that will serve for the same use as starch	the cwt.	0 10 0	0 10 0

ARTICLES.		Of or from Foreign Countries.	Of and from British Possessions.
Poultry, alive or dead	for every 100*l* value	5 0 0	2 10 0
Prints and drawings, plain or coloured, single	each	0 0 1	0 0 1
——————— bound or sewn	the dozen	0 0 3	0 0 3
Prunes	the cwt.	0 7 0	0 7 0
Prussiate of Potash		Free.	Free.
Puddings and sausages		0 0 3	0 0 1
Quassia	the cwt.	0 10 0	0 10 0
Quicksilver		Free.	Free.
Quills, *viz.*			
——— goose		—	—
——— swan		—	—
Quinces	the 1,000	0 1 0	0 1 0
Quinine, sulphate of	the oz.	0 0 6	0 0 6
Radix, *viz.*			
——— contrayervæ		Free.	Free.
——— enulæ companæ		—	—
——— eringii		—	—
——— ipecacuanhæ		—	—
——— rhataniæ		—	—
——— senekæ		—	—
——— serpentariæ, or snake root		—	—
Rags, *viz.*			
—— old rags, old junk or ropes, or old fishing nets, fit only for making paper or pasteboard		—	—
—— pulps of rags		—	—
—— old woollen		—	—
Raisins	the cwt.	0 15 0	0 7 6
Rape of grapes		Free.	Free.
Red wood or guinea wood		—	—
Rhubarb		—	—
Rice, *viz.*			
—— not rough nor in the husk	the cwt.	0 1 0	0 0 6
—— rough and in the husk	the quarter	0 1 0	0 0 1
Rosewood		Free.	Free.
Rosin		—	—
Saccharum saturni	the cwt.	0 10 0	0 10 0
Safflower		Free.	Free.
Saffron		—	—
Sago	the cwt.	0 0 6	0 0 6
Sal, *viz.*			
—— ammoniac		Free.	Free.
—— limonum		—	—
—— prunelle		—	—
Salep or salop		—	—
Salt		—	—
Saltpetre		—	—
Sanguis draconis		—	—
Santa Maria wood		—	—
Sapan wood		—	—
Sarsaparilla		—	—
Sassafras		—	—
Satin wood		—	—

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Saunders, red, white, or yellow	Free.	Free.
Sausages or puddings . . . the lb.	0 0 1	0 0 1
Scaleboards . . . the cwt.	1 10 0	1 10 0
Scammony	Free.	Free.
Seeds, *viz.*		
—— acorns	—	—
—— anniseed	—	—
—— burnet	—	—
—— canary . . . the bushel	0 5 0	0 2 6
—— carraway . . . the cwt.	0 5 0	0 2 6
—— carrot . . . the cwt.	0 5 0	0 2 6
—— clover . . . the cwt.	0 5 0	0 2 6
—— colchicum	Free.	Free.
—— cole	—	—
—— coriander	—	—
—— croton	—	—
—— cummin	—	—
—— fennugreek	—	—
—— flax	—	—
—— forest	—	—
—— garden, unenumerated, nor otherwise charged with duty	—	—
—— grass, of all sorts, not particularly enumerated, or otherwise charged with duty . the cwt.	0 5 0	0 2 6
—— hemp	Free.	Free.
—— leek . . . the cwt.	0 5 0	0 2 6
—— lettuce	Free.	Free.
—— linseed	—	—
—— lucerne . . . the cwt.	0 5 0	0 5 0
—— lupines	Free.	Free.
—— maw	—	—
—— millet	—	—
—— mustard . . . the cwt.	0 1 3	0 0 7½
—— onion . . . the cwt.	0 5 0	0 2 6
—— parsley	Free.	Free.
—— poppy	—	—
—— quince	—	—
—— rape	—	—
—— sesamum	—	—
—— shrub or tree	—	—
—— tares	—	—
—— trefoil . . . the cwt.	0 5 0	0 2 6
—— worm	Free.	Free.
—— all seeds unenumerated, commonly used for expressing oil therefrom	—	—
—— all other seeds not particularly enumerated or described, nor otherwise charged with duty, for every 100*l.* value	5 0 0	2 10 0
Senna	Free.	Free.
Ships to be broken up with their tackle, apparel, and furniture, (except sails), *viz.*		
—— foreign ships or vessels for every 100*l.* value	25 0 0	25 0 0
—— foreign ships broken up for every 100*l.* value	10 0 0	10 0 0
—— British ships or vessels entitled to be registered as such, and not having been built in the United Kingdom	Free.	Free.
Shumac	—	—

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Silk, *viz.*		
—— knubs or husks of silk, and waste silk . .	Free.	Free.
—— raw silk	—	—
—— thrown silk, not dyed	—	—
—— —— dyed, *viz.*		
—— —— singles or tram . . .	—	—
—— —— organzine or crape silk . . .	—	—
—— manufactures of silk, or of silk mixed with metal, or any other material, the produce of Europe, *viz.*		
——— silk or satin, plain, striped, figured, or brocaded, *viz.*		
——— — broad stuffs . . the lb.	0 5 0	
———— articles thereof, not otherwise enumerated the lb.	0 6 0	
———— or, and at the option of the officers of the customs for every 100*l.* value	15 0 0	
———— gauze or crape, plain, striped, figured, or brocaded, *viz.*		
———— broad stuffs . . the lb.	0 9 0	
———— articles thereof, not otherwise enumerated the lb.	0 10 0	
———— or, and at the option of the officers of the customs for every 100*l.* value	15 0 0	
——— gauze of all descriptions, mixed with silk, satin, or any other materials in less proportion than one half part of the fabric, *viz.*		
———— broad stuffs . . the lb.	0 9 0	
———— articles thereof, not otherwise enumerated the lb.	0 10 0	
———— or, and at the option of the officers of the customs for every 100*l.* value	15 0 0	
——— velvet, plain or figured, *viz.*		
———— broad stuff . . the lb.	0 9 0	
———— articles thereof, not otherwise enumerated the lb.	0 10 0	
———— or, and at the option of the officers of the customs for every 100*l.* value	15 0 0	
—— ribbons, plain silk, of one colour only the lb.	0 6 0	
——— plain satin, of one colour only the lb.	0 8 0	
——— silk or satin, striped, figured, or brocaded, or plain ribbons of more than one colour the lb.	0 10 0	
——— gauze or crape, plain, striped, figured, or brocaded . . . the lb.	0 14 0	
——— gauze mixed with silk, satin, or other materials, of less proportion than one half part of the fabric . . . the lb.	0 12 0	
——— velvet, or silk embossed with velvet the lb.	0 10 0	
—— artificial flowers wholly or in part of silk for every 100*l.* value	25 0 0	
—— manufactures of silk or of silk and any other material called plush, commonly used for making hats the lb.	0 2 0	
—— fancy silk net or tricot the lb.	0 8 0	
—— plain silk lace or net, called tulle the lb.	0 8 0	

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Silk—*continued.*		
—— manufactures of silk, or of silk mixed with any other materials, not particularly enumerated or otherwise charged with duty for every 100*l.* value	15 0 0	
—— ribbons, of and from a British possession for every 100*l* value.	..	5 0 0
—— millinery of silk, or of which the greater part of the material is silk, *viz.*		
——— turbans or caps each	0 3 6	
——— hats or bonnets each	0 7 0	
——— dresses each	1 10 0	
——— manufactures of silk, or of silk and any other materials, and articles of the same wholly or partially made up, not particularly enumerated or otherwise charged with duty for every 100*l.* value	15 0 0	
Silkworm gut for every 100*l.* value	10 0 0	10 0 0
Skins, furs, pelts, and tails, or pieces of skins, raw or undressed, unenumerated	Free.	Free.
Skins, furs, pelts, and tails, or pieces of skin, tanned, curried, dressed, unenumerated	—	—
—— articles manufactured of skins or furs, for every 100*l.* value	10 0 0	5 0 0
Smalts the cwt.	0 10 0	0 10 0
Soap, hard the cwt.	1 0 0	0 14 0
—— soft the cwt.	0 14 0	0 10 0
—— Naples the cwt.	1 0 0	1 0 0
Spa ware for every 100*l.* value	10 0 0	10 0 0
Specimens of minerals or fossils, and all specimens illustrative of Natural History	Free.	Free.
Speckled wood	—	—
Spelter or zinc, *viz.*		
——— crude, in cakes	—	—
——— rolled, but not otherwise manufactured	—	—
——— manufactures of for every 100*l.* value	10 0 0	10 0 0
Spermaceti, fine for every 100*l.* value	25 0 0	25 0 0
———— from and after 1st January, 1849	Free.	Free.
Spirits or strong waters of all sorts, *viz.*		
——— for every gallon of such spirits or strong waters of any strength not exceeding the strength of proof by Sykes's hydrometer, and so in proportion for any greater or less strength than the strength of proof, and for any greater or less quantity than a gallon, *viz.*		
——— not being spirits or strong waters the produce of any British possession in America, or any British possession within the limits of the East India Company's Charter, and not being sweetened spirits or spirits mixed with any article, so that the degree of strength thereof cannot be exactly ascertained by such hydrometer the gallon	0 15 0	
——— spirits or strong waters, the produce of any British possession in America, not being sweetened spirits, or spirits so mixed as aforesaid, the gallon	..	0 8 10

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Spirits—*continued.*		
——— rum, the produce of any British possession within the limits of the East India Company's charter, not being sweetened spirits or spirits so mixed as aforesaid, in regard to which the conditions of the Act 4 Vict. c. 8. have or shall have been fulfilled . the gallon	..	0 9 0
——— rum shrub, however sweetened, the produce of and imported from such possessions in regard to which the conditions of the Act 4 Vict. c. 8. have or shall have been fulfilled, or the produce of and imported from any British possession in America . the gallon	..	0 8 10
——— spirits or strong waters, the produce of any British possession within the limits of the East India Company's charter, except rum, in regard to which the conditions of the Act 4 Vict. c. 8. have or shall have been fulfilled, not being sweetened spirits or spirits so mixed as aforesaid . . . the gallon	..	0 15 0
——— sprits, cordials, or strong waters, not being the produce of any British possession in America, nor any British possession within the limits of the East India Company's Charter, in regard to which the conditions of the Act 4 Vict. c. 8. have or shall have been fulfilled, sweetened or mixed with any article, so that the degree of strength thereof cannot be exactly ascertained by Sykes's hydrometer, and perfumed spirits to be used as perfumery only the gallon	1 10 0	1 10 0
——— strong waters, except rum shrub being the produce of any British possession in America, or of any British possession qualified as aforesaid, sweetened or mixed with any article as aforesaid . . the gallon	..	1 0 0
——— cordials and liqueurs, except rum shrub, being the produce of any British possession in America, or of any British possession within the limits of the East India Company's charter, in regard to which the conditions of the Act 4 Vict. c. 8. have or shall have been fulfilled, sweetened or mixed with any article, so that the degree of strength thereof cannot be ascertained by Sykes's hydrometer the gallon	..	0 9 0
Sponge	Free.	Free.
Squills, dried and not dried . . .	—	—
Starch . . . . . the cwt.	0 5 0	0 2 6
——— from and after the 1st February, 1849 the cwt.	0 1 0	0 1 0
Starch, gum of, torrified or calcined, commonly called British gum . . . the cwt.	0 5 0	0 2 6
——— from and after the 1st February, 1849 the cwt.	0 1 0	0 1 0
Stavesacre	Free.	Free.
Steel, manufactures of . for every 100*l.* value	10 0 0	10 0 0
——— unwrought	Free.	Free.
Scrap steel	—	—
Stereotype plates . for every £100. value	10 0 0	10 0 0

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Stones, in lumps not in any manner hewn, slate and marble in rough blocks or slabs, limestone, flint stones, felspar, and stones for potters use, pebble stones, stone to be used for the purpose of lithography . . .	Free.	Free.
—— in blocks, shaped or rough scalped . .	—	—
—— stone and slate, hewn . . the ton	0 10 0	0 1 0
—— marble, sawn, in slabs, or otherwise manufactured . . . the cwt.	0 3 0	0 1 6
Straw or grass for platting . . .	Free.	Free.
Succades, including all fruits and vegetables preserved in sugar . . . . the lb.	0 0 6	0 0 1
Sugar or molasses. The growth and produce of any British possession in America, or of any British possession within the limits of the East India Company's Charter, into which the importation of foreign sugar is prohibited, and imported from thence, viz.		
—— candy, brown or white, double refined sugar, or sugar equal in quality to double refined the cwt.		1 1 0
—— other refined sugar, or sugar rendered by any process equal in quality thereto . the cwt.	..	0 18 8
—— white clayed sugar, or sugar rendered by any process equal in quality to white clayed, not being refined . . . the cwt.	..	0 16 4
—— brown sugar, being Muscovado or clayed, or any other sugar not being equal in quality to white clayed . . . the cwt.	..	0 14 0
—— molasses . . . the cwt.	..	0 5 3
Sugar, the growth and produce of any other British possession within the limits of the East India Company's Charter.		
Candy, brown or white, double refined sugar, or sugar equal in quality to double refined, for every cwt.		
From and after August, 1846, to 5th July, 1847, inclusive	..	1 6 3
From and after 5th July, 1847, to 5th July, 1848, inclusive	..	1 5 6
From and after 5th July, 1848, to 5th July, 1849, inclusive	..	1 4 4
From and after 5th July, 1849, to 5th July, 1850, inclusive	..	1 3 3
From and after 5th July, 1850, to 5th July, 1851, inclusive	..	1 2 0
From and after 5th July, 1851. The same duties as on candy, sugar, and molasses, the produce of other British colonies.		
Other refined sugar, or sugar rendered by any process equal in quality thereto, for every cwt.		
From and after August, 1846, to 5th July, 1847, inclusive	..	1 3 4
From and after 5th July, 1847, to 5th July, 1848, inclusive	..	1 2 8
From and after 5th July, 1848, to 5th July, 1849, inclusive	..	1 1 8

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Sugar—*continued.*		
From and after 5th July, 1849, to 5th July, 1850, inclusive	..	1 0 8
From and after 5th July, 1850, to 5th July, 1851, inclusive	..	0 19 8
From and after 5th July, 1851. The same duties as on candy, sugar, and molasses, the produce of other British colonies.		
White clayed sugar, or sugar rendered by any process equal in quality to white clayed, not being refined, for every cwt.		
From and after August 1846, to 5th July, 1847, inclusive	..	1 0 5
From and after 5th July, 1847, to 5th July, 1848, inclusive	..	0 19 10
From and after 5th July, 1848, to 5th July, 1849, inclusive	..	0 18 11
From and after 5th July, 1849, to 5th July, 1850, inclusive	..	0 18 1
From and after 5th July, 1850, to 5th July, 1851, inclusive	..	0 17 2
From and after 5th July, 1851. The same duties as on candy, sugar, and molasses, the produce of other British colonies.		
Brown sugar, being Muscovado, or clayed, or any other sugar, not being equal in quality to white clayed, for every cwt.		
From and after August, 1846, to 5th July, 1847, inclusive	..	0 17 6
From and after 5th July, 1847, to 5th July, 1848, inclusive	..	0 17 0
From and after 5th July, 1848, to 5th July, 1849, inclusive	..	0 16 3
From and after 5th July, 1849, to 5th July, 1850, inclusive	..	0 15 6
From and after 5th July, 1850, to 5th July, 1851, inclusive	..	0 14 9
From and after 5th July, 1851. The same duties as on candy, sugar, and molasses, the produce of other British colonies.		
Molasses, for every cwt.		
From and after August, 1846, to 5th July, 1847, inclusive	..	0 6 6
From and after 5th July, 1847, to 5th July, 1848, inclusive	..	0 6 4
From and after 5th July, 1848, to 5th July, 1849, inclusive	..	0 6 1
From and after 5th July, 1849, to 5th July, 1850, inclusive	..	0 5 9
From and after 5th July, 1850, to 5th July, 1851, inclusive	..	0 5 6
From and after 5th July, 1851. The same duties as on candy, sugar, and molasses, the produce of other British colonies.		

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Sugar—*continued.*		
Sugar, the growth and produce of any foreign country, *viz.*		
Candy, brown or white, double refined sugar, or sugar equal in quality to double refined, for every cwt.		
From and after August 1846, to 5th July, 1847, inclusive	1 11 6	
From and after 5th July, 1847, to 5th July, 1848, inclusive	1 10 0	
From and after 5th July, 1848, to 5th July, 1849, inclusive	1 7 9	
From and after 5th July, 1849, to 5th July, 1850, inclusive	1 5 6	
From and after 5th July, 1850, to 5th July, 1851, inclusive	1 3 3	
From and after 5th July, 1851. The same duties as on candy, sugar, and molasses, the produce of British colonies.		
Other refined sugar, or sugar rendered by any process equal in quality thereto, for every cwt.		
From and after August 1846, to 5th July, 1847, inclusive	1 8 0	
From and after 5th July, 1847, to 5th July, 1848, inclusive	1 6 8	
From and after 5th July, 1848, to 5th July, 1849, inclusive	1 4 8	
From and after 5th July, 1849, to 5th July, 1850, inclusive	1 2 8	
From and after 5th July, 1850, to 5th July, 1851, inclusive	1 0 8	
From and after 5th July, 1851. The same duties as on candy, sugar and molasses, the produce of British colonies.		
White clayed sugar, or sugar rendered by any process equal in quality to white clayed, not being refined, for every cwt.		
From and after August, 1846, to 5th July, 1847, inclusive	1 4 6	
From and after 5th July, 1847, to 5th July, 1848, inclusive	1 3 4	
From and after 5th July, 1848, to 5th July, 1849, inclusive	1 1 7	
From and after 5th July, 1849, to 5th July, 1850, inclusive	0 19 10	
From and after 5th July, 1850, to 5th July, 1851, inclusive	0 18 1	
From and after 5th July, 1851. The same duties as on candy, sugar, and molasses, the produce of British colonies.		
Brown sugar, being Muscovado, or clayed, or any other sugar, not being equal in quality to white clayed, for every cwt.		
From and after August, 1846, to 5th July, 1847, inclusive	1 1 0	
From and after 5th July, 1847, to 5th July, 1848, inclusive	1 0 0	

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Sugar—*continued.*		
From and after 5th July, 1848, to 5th July, 1849, inclusive	0 18 6	
From and after 5th July, 1849, to 5th July, 1850, inclusive	0 17 0	
From and after 5th July, 1850, to 5th July, 1851, inclusive	0 15 6	
From and after 5th July, 1851. The same duties as on candy, sugar, and molasses, the produce of British colonies.		
Molasses, for every cwt.		
From and after August, 1846, to 5th July, 1847, inclusive	0 7 10	
From and after 5th July, 1847, to 5th July, 1848, inclusive	0 7 6	
From and after 5th July, 1848, to 5th July, 1849, inclusive	0 6 11	
From and after 5th July, 1849, to 5th July, 1850, inclusive	0 6 4	
From and after 5th July, 1850, to 5th July, 1851, inclusive	0 5 9	
From and after 5th July, 1851. The same duties as on candy, sugar, and molasses, the produce of British colonies.		
On all foreign sugar and molasses not otherwise charged with duty, *viz.*		
—— refined sugar, or sugar candy the cwt.	3 3 0	
—— brown or Muscovado, or clayed sugar, not being refined the cwt.	2 2 0	
—— molasses the cwt.	0 15 8	
The following bounties or drawbacks, to be allowed upon the exportation of certain descriptions of refined sugar from the United Kingdom, that is to say—		
—— upon double refined sugar, or sugar equal in quality to double refined the cwt.	1 0 0	
—— upon other refined sugar in loaf, complete and whole or lumps duly refined, having been perfectly clarified and thoroughly dried on the stove, and being of an uniform whiteness throughout, or such sugar pounded, crushed, or broken, or sugar candy the cwt.	0 17 0	
—— upon bastard or refined sugar broken in pieces, or being ground, or powdered sugar pounded, or crushed or broken the cwt.	0 14 0	
Sulphur impressions	Free.	Free.
———— vivum. *See* brimstone.		
Sweet wood	..	..
Talc	..	..
Tallow the cwt.	0 1 6	0 0 1
Tamarinds the lb.	0 0 3	0 0 1
Tapioca the cwt.	0 0 6	0 0 6
Tar	Free.	Free.
—— Barbadoes	..	..
Tarras	..	..
Tartaric acid	..	..

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Tea . . . . . . the lb.	0 2 1	0 2 1
Teasles	Free.	Free.
Teeth, *viz.* elephant, sea cow, sea horse, or sea morse	..	..
Telescopes	..	..
Terra Japonica	..	..
—— Sienna	..	..
—— Umbra	..	..
—— Verde	..	..
Thread, not otherwise enumerated or described	..	..
Tiles . . for every 100*l.* value.	10 0 0	5 0 0
Tin, ore and regulus of	Free.	Free.
—— in blocks, ingots, bars, or slabs the cwt.	0 6 0	0 3 0
—— manufactures of, not otherwise enumerated for every 100*l.* value.	10 0 0	10 0 0
—— foil . . . . the lb.	0 0 6	0 0 6
Tincal, unrefined	Free.	Free.
Tobacco, *viz.*		
———— unmanufactured . the lb.	0 3 0	0 3 0
———— snuff . . . the lb.	0 6 0	0 6 0
———— manufactured, or cigars . the lb.	0 9 0	0 9 0
———— stalks and flour of	Prohibited	Prohibited
———— manufactured in the United Kingdom, at or within two miles of any port into which tobacco may be imported, made into shag, roll, or carrot tobacco, drawback upon exportation or shipment as stores, the lb., 2*s.* 7½*d.*		..
Tobacco pipes of clay for every 100*l.* value.	10 0 0	10 0 0
Tongues . . . . the cwt.	0 7 0	0 2 0
Tornsal	Free.	Free.
Tortoiseshell or turtleshell, unmanufactured	..	..
Toys, excepting toy and hand mirrors, on which the plate glass duty will be levied for every 100*l.* value	10 0 0	10 0 0
Truffles . . . . . the lb.	0 1 0	0 1 0
Tulip wood	Free.	Free.
Turmeric	..	..
Turnery, not otherwise described for every 100*l.* value	10 0 0	10 0 0
Turpentine, *viz.*		
———— not being of greater value than 15*s.* per cwt.	Free.	Free.
———— above 15*s.* per cwt. . the cwt.	0 2 0	0 2 0
———— of Venice, Scio, or Cyprus	Free.	Free.
Twine . . for every 100*l.* value	10 0 0	5 0 0
Type, printers . . for every 100*l.* value	10 0 0	10 0 0
Ultra Marine	Free.	Free.
Valonia	..	..
Vanelloes . . . . the lb.	0 5 0	0 5 0
Varnish, not otherwise described for every 100*l.* value	10 0 0	10 0 0
Vases, ancient, not of stone or wood	Free.	Free.
Vegetables, *viz.*, all vegetables not enumerated or described	..	..
Vellum	..	..
Verdegris . . . . . the cwt.	0 5 0	0 5 0
Verjuice . . . . the tun	4 4 0	4 4 0
Vermilion	Free.	Free.

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Vinegar the tun	4 4 0	4 4 0
Wafers for every 100*l.* value	10 0 0	10 0 0
Washing balls the cwt.	1 0 0	1 0 0
Walnut wood	Free.	Free.
Watches of gold, silver, or other metal for every 100*l.* value	10 0 0	10 0 0
Water, Cologne, the flask (thirty containing not more than one gallon)	0 1 0	0 1 0
—— mineral water	Free.	Free.
Wax, bees wax	—	—
—— in any degree bleached	—	—
—— myrtle wax	—	—
—— sealing wax for every 100*l.* value.	10 0 0	10 0 0
—— vegetable	Free.	Free.
Weld	—	—
Whales fins, British taking, and imported direct from the fishery, or from any British possession in a British ship	—	—
—— otherwise taken for every 100*l.* value.	20 0 0	20 0 0
—— Foreign taking, and not prohibited, from and after 1st January 1847	Free.	Free.
Whipcord for every 100*l.* value.	10 0 0	10 0 0
Wine, *viz.*		
—— the produce of the Cape of Good Hope or the territories or dependencies thereof, and imported directly from thence the gallon		0 2 9
—— French the gallon	0 5 6	
—— Canary the gallon	0 5 6	
—— Madeira the gallon	0 5 6	
—— Portugal the gallon	0 5 6	
—— Rhenish the gallon	0 5 6	
—— Spanish the gallon	0 5 6	
—— other sorts the gallon	0 5 6	
(The full duties on wine are drawn back upon re-exportation or shipment as stores)		
—— Lees, subject to the same duty as wine, but no drawback is allowed on the lees of wine exported.		
Wire, gilt or plated, or silver for every 100 value.	10 0 0	10 0 0
Woad	Free.	Free.
Wood.		
Timber and woods not otherwise charged, *viz.*		
Timber or wood, not being deals, battens, boards, staves, handspikes, oars, lathwood, or other timber or wood sawn, split, or otherwise dressed, except hewn, and not being timber or wood otherwise charged with duty the load of 50 cubic feet		0 1 0
From and after 5th April 1847	1 0 0	
From and after 5th April 1848	0 15 0	
—— Deals, battens, boards, or other timber or wood sawn or split, and not otherwise charged with duty the load of 50 cubic feet		0 2 0
From and after 5th April 1847	1 6 0	
From and after 5th April 1848	1 0 0	

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Wood—*continued.*		
—— Birch, hewn, not exceeding three feet in length, nor exceeding eight inches square, imported for the sole purpose of making herring barrels for the use of the fisheries . . .	Free.	Free.
—— Staves not exceeding 72 inches in length, nor seven inches in breadth, nor 3½ inches in thickness	Free.	Free.
—— Staves, if exceeding 72 inches in length, 7 inches in breadth, or 3½ inches in thickness the load of 50 cubic feet		
From and after 5th April 1847 . . .	1 3 0	
From and after 5th April 1848 . .	0 18 0	
—— firewood the fathom of 216 cubic feet		Free.
From and after 5th April 1847 . . .	0 8 0	
From and after 5th April 1848 . . .	0 6 0	
—— handspikes, not exceeding seven feet in length the 120		0 0 6
From and after 5th April, 1847 . .	0 16 0	
From and after 5th April, 1848 . . .	0 12 0	
—— —— exceeding seven feet in length the 120		0 1 0
From and after 5th April, 1847 . .	1 12 0	
From and after 5th April, 1848 . . .	1 4 0	
—— knees, under the five inches square the 120		0 0 8
From and after 5th April, 1847 . .	0 8 0	
From and after 5th April, 1848 . . .	0 6 0	
—— —— five inches and under eight inches square the 120		0 1 0
From and after 5th April, 1847 . .	1 12 0	
From and after 5th April, 1848 . . .	1 4 0	
—— lathwood the fathom of 216 cubic feet		0 1 0
From and after 5th April, 1847 . .	1 12 0	
From and after 5th April, 1848 . . .	1 4 0	
—— oars . . . . the 120		0 3 9
From and after 5th April. 1847 . .	6 0 0	
From and after 5th April, 1848 . . .	4 10 0	
—— spars or poles under 22 feet in length, and under four inches in diameter the 120		0 0 6
From and after 5th April, 1847 . .	0 16 0	
From and after 5th April, 1848 . . .	0 12 0	
—— —— 22 feet in length and upwards, and under four inches in diameter the 120		0 1 0
From and after 5th April, 1847 . .	1 12 0	
From and after 5th April, 1848 . . .	1 4 0	
—— —— of all lengths, four inches and under six inches in diameter . the 120		0 2 0
From and after 5th April, 1847 . .	3 4 0	
From and after 5th April, 1848 . . .	2 8 0	
—— spokes for wheels, not exceeding two feet in length . . the 1000		0 1 0
From and after 5th April, 1847 . .	1 12 0	
From and after 5th April, 1848 . . .	1 4 0	
—— —— exceeding two feet in length the 1000		0 2 0
From and after 5th April, 1847 . .	3 4 0	
From and after 5th April, 1848 . . .	2 8 0	

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Wood—*continued.*		
Wood, planed, or otherwise dressed or prepared for use, and not particularly enumerated, nor otherwise charged with duty for every 100*l.* value		5 0 0
—— From and after 5th April, 1847 per foot of cubic contents	0 0 6	
and further for every 100*l.* value	10 0 0	
—— From and after 5th April, 1848 per foot of cubic contents	0 0 4	
and further for every 100*l.* value	10 0 0	
Teake	Free.	Free.
Wood for shipbuilding, previously admitted at the same duty as teake	—	—
Wastewood, *viz.*, billetwood or brushwood, used for the purposes of stowage for every 100*l.* value	5 0 0	0 5 0
—— maple, being furniture wood . .	Free.	Free.
—— NewZealand wood, being furniture wood .	—	—

Or, in lieu of the Duties imposed upon Wood by the Load according to the Cubic Content, the Importer may have the Option, at the Time of passing the first Entry, of entering Battens, Batten Ends, Boards, Deals, Deal Ends, and Plank, by Tale, if of or from Foreign Countries, according to the following Dimensions; *videlicet,*

ARTICLES.	Not above 7 inches in width.	From and after 5th April 1847.		From and after 5th April 1848.	
		Not above 1¼ inch in thickness.	Above 1¼ inch and not above 2¾ in thickness.	Not above 1¼ inch in thickness.	Above 1¼ inch and not above 2¾ in thickness.
Wood—*continued.*					
Battens and batten ends:	£. s. d.	£. s. d.	£, s. d	£. s. d.	£. s. d.
Not above 6 feet in length the 120	..	1 4 8	2 9 3	0 18 6	1 17 0
Above 6 and not above 9 feet in length the 120	..	1 16 11	3 13 10	1 7 9	2 15 6
Above 9 and not above 12 feet in length the 120	..	2 9 3	4 18 6	1 16 11	3 13 10
Above 12 and not above 15 feet in length the 120	..	3 1 7	6 3 2	2 6 3	4 12 6
Above 15 and not above 18 feet in length the 120	..	3 13 10	7 7 8	2 15 4	5 10 8
Above 18 and not above 21 feet in length the 120	..	4 6 2	8 12 4	3 4 6	6 9 0
	Not above 9½ inches in width.	Not above 1½ inch in thickness.	Above 1½ inch & not above 3½ in thickness.	Not above 1½ inch in thickness.	Above 1½ inch & not above 3½ in thickness.
Boards, deals, deal ends, and plank:					
Not above 6 feet in length the 120	..	1 19 6	3 19 0	1 9 10	2 19 8
Above 6 and not above 9 feet in length the 120	..	2 19 3	5 18 6	2 4 5	4 8 10
Above 9 and not above 12 feet in length the 120	..	3 19 0	7 18 0	2 19 2	5 18 4
Above 12 and not above 15 feet in length the 120	..	4 18 10	9 17 8	3 14 2	7 8 4
Above 15 and not above 18 feet in length the 120	..	5 18 7	11 17 2	4 8 11	8 17 10
Above 18 and not above 21 feet in length the 120	..	6 18 4	13 16 8	5 3 8	10 7 4
	Above 9½ inches, and not above 11½ in width.				
Not above 6 feet in length the 120	..	2 7 10	4 15 8	1 15 10	3 11 8
Above 6 and not above 9 feet in length the 120	..	3 11 8	7 3 4	2 13 8	5 7 4
Above 9 and not above 12 feet in length the 120	..	4 15 7	9 11 2	3 11 7	7 3 2
Above 12 and not above 15 feet in length the 120	..	5 19 7	11 19 2	4 9 7	8 19 2
Above 15 and not above 18 feet in length the 120	..	7 3 6	14 7 0	5 7 6	10 15 0
Above 18 and not above 21 feet in length the 120	..	8 7 6	16 15 0	6 5 8	12 11 4

ARTICLES.	Of or from Foreign Countries.	Of and from British Possessions.
Wool, *viz.*		
—— alpaca, and the llama tribe	Free.	Free.
—— beaver	—	—
—— —— cut and combed	—	—
—— coney	—	—
—— cotton, or waste of cotton wool	—	—
—— goats, or hair	—	—
—— hares	—	—
—— sheep or lambs wool	—	—
Woollens, *viz.*		
—— manufactures of wool, not being goat's wool, or of wool mixed with cotton, not particularly enumerated or described, not otherwise charged with duty, not being articles wholly or in part made up	Free.	Free.
—— articles or manufactures of wool, not being goat's wool, or of wool mixed with cotton, wholly or in part made up, not otherwise charged with duty . for every £100. value	10 0 0	5 0 0
Yarn, *viz.*		
—— cable . the cwt.	0 3	0 3 0
—— camel or mohair	Free.	Free.
—— raw linen	—	—
Worsted . the lb.	0 0	0 0 6
Zaffre	Free.	Free.
Zebra wood	—	—
Goods, wares, and merchandize, being either in part or wholly manufactured, and not being enumerated or described, not otherwise charged with duty, and not prohibited to be imported into or used in Great Britain or Ireland . for every £100. value	10 0 0	10 0 0
Goods unenumerated, not being either in part or wholly manufactured, not enumerated or prohibited	Free.	Free.

DUTIES ON GOODS EXPORTED.

		£.	s.	d.
Coals, culm, or cinders in a foreign ship	the ton —	0	4	0

EXCISE DUTIES.

Bricks, for every 1000 of a size not exceeding 150 cubic inches		0	5	10
—— every 1000 exceeding ditto		0	10	0
Hops	*lb.*	0	0	2
Malt from barley	*bush.*	0	2	7
—— bear or bigg	*bush.*	0	2	0
Paper and pasteboard	*lb.*	0	0	1½
Soap, hard	*lb.*	0	0	1½
—— soft	*lb.*	0	0	1
Spirits, in England	*gall.*	0	7	10
—— Scotland	*gall.*	0	3	8
—— Ireland	*gall.*	0	2	8

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